

**“MOVING THINGS FORWARD”:
BIRTHING SUITE CULTURE
AND LABOUR AUGMENTATION
FOR HEALTHY FIRST-TIME MOTHERS.**

By

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**A thesis submitted to the Victoria University of Wellington
in fulfilment of the requirements for the degree of
Doctor of Philosophy**

Victoria University of Wellington

2020

Abstract

In Aotearoa New Zealand, healthy women giving birth for the first time may plan to give birth in range of settings - from home to a tertiary hospital where surgical and anaesthetic services are available. Each birth location has its own culture, and the extent to which this culture influences the birth experience lies at the heart of this research. Just twenty-three percent of first-time mothers experience a normal birth with no obstetric interventions, and the chosen place of birth is implicated in this statistical outcome. Tertiary maternity settings report the highest rates of birth interventions, even for healthy women who can anticipate straightforward labour experiences. Among the most frequently used birth interventions are labour augmentation procedures - artificial rupture of membranes and administration of synthetic oxytocin infusions.

My critical realist ethnography aims to explore the cultural landscape within one tertiary birthing suite and in doing so to identify the generative mechanisms that influence the likelihood of labour augmentation for well first-time mothers. I begin with a retrospective chart review to uncover the magnitude of the use of augmentation procedures for a sample of healthy women presenting in labour to the birthing suite over one calendar year. Interviews with women who experienced long labours yield insights about their decision-making with respect to augmentation. Focus groups and interviews with midwives and obstetric doctors contribute an understanding of factors associated with their use of augmentation, and a period of non-participant observation in the birthing suite illuminates the nuanced ways the unit culture contributes to the permissive use of augmentation procedures in this birthing environment.

Findings reveal that sixty percent of women experienced labour augmentation procedures and for one third of them, the augmentation was not indicated according to the clinical guideline in use at the time. Pressure to be “moving things forward” characterises the birthing suite culture. The identified generative mechanisms that combine to influence the likelihood of augmentation include a lack of belief in birth, not valuing midwives, the education and socialisation of midwives and doctors, and the industrialisation of birth - all underpinned by available social discourses about being a good mother, a good midwife or a good doctor.

Ironically, the very attributes that make the tertiary hospital the ideal place to be when birth is complex or the unexpected happens (‘poised-ness’ for action, being a ‘well-oiled machine’ for emergency care, surveillance and control) are the same attributes

that create a dis-abling environment for physiological first birth to unfold at its own pace. The 'perfect system' is in place; a well-embedded midwifery-led continuity of care model incorporating seamless and integrated secondary referral processes. But despite this potentially enabling model of maternity care, once 'nested' within the tertiary hospital setting the impact of social, professional and industrial discourses overwhelms the salutogenic factors that should protect normal birth.

A re-focussed commitment to providing continuity of care across the labour continuum, home visiting in early labour, enhancing physiological birth support in both the relational and environmental realms, averting the obstetric gaze and prioritising women's needs over institutional needs represent the best way forward as strategies to resist the inexorable rise of obstetric intervention. Midwives are well-positioned to respond to this call. Reclaiming their expertise in support of physiological first birth by driving the practice and research agenda presents the optimal way to "move things forward" for women.

Key words: first birth, labour augmentation, critical realism, ethnography, birth environment

Acknowledgements

I am not the first to express this sentiment, but the production of a PhD thesis is a communal activity, despite often feeling like a very solitary one. It has taken five years, and many people have been threads in the warp and weft of this project along the way. But it is precisely the individual threads that create the strength and beauty within any tapestry. I am thrilled to at last be able to say a huge thanks to those who have awhi'd and inspired me, even in the direst moments when I feared my mind would be so expanded I would lose it completely!

Driving to writing bootcamp one Saturday morning, I was inspired by a radio interview with Victor Rodger - journalist, actor, playwright. He discussed how in his writing he touches on taboo topics, acknowledging how grounding it is to "give [himself] permission to write the thought" (RNZ, 20.07.19). He meant that although what he writes creates un-ease for some, it is nonetheless important to give breath to challenging or unpopular ideas – so that they might be more widely reflected upon. In a sense this concept has emboldened my own writing, and I fervently hope that while some of my ideas might feel prickly for some, giving breath to them in this way might encourage deeper thinking in many. So thanks, Victor Rodger, for giving me courage.

Research does not happen without willing participants. To those who were willing, sincerest thanks for your honesty and insights, and for welcoming me into your busy lives. Without the women, midwives, doctors and managers this thesis would literally have no heart. I hope I have done justice to your stories and hope you feel heard.

To my supervisors – Associate Prof. Robyn Maude, Prof. Deborah Davis and (for a short while at the start) Prof. Jo Walton – your trust that I was getting on with it and gentle guidance back on track at the right moments were just what I needed. Each of you has gifted me something unique. I learned that having the freedom to explore, the 'nudge' to stimulate my curiosity, and the humility to learn from my mistakes, is the sort of guidance that demonstrates the most wisdom. Heartfelt thanks.

To Anna-Marie - aku mihinui ki a koe, e hoa. As I write this at our 30th (really?!) writing bootcamp, I cannot thank you enough for your manaakitanga. You led me to discover a discipline I never knew I had in me, quite apart from all the fabulous kai and insightful discussion. Sue, you asked exactly the right question at the right time and didn't even

know it. Forever grateful. And Holly, you showed me that being willing to expose who you are can be liberating even when this might come at some personal cost.

To my wonderful colleagues at Mamaku Midwives, those at the Otago Polytechnic School of Midwifery, and my soon-to-be-colleague student midwives – you have tolerated my absences, fed me, tossed ideas around with me and been very understanding when my inbox (real and metaphorical) has stayed full for too long. Your support and encouragement have got me across the line. Bridget – special thanks for the technical assistance and the occasional timely G and T!

Thanks also to Lisa Wood (statistician), and Keith Fischer (data manager) for your help with the chart review preparation and analysis. I am grateful to Health Workforce New Zealand for the Postgraduate Study Grant and to Victoria University of Wellington for a Doctoral Scholarship during one year of this project.

Lastly, to my extraordinary family. There's nothing like being a midwife to make you appreciate seasons and cycles. In my before - Joy and Drew. As I began writing the proposal for this research, I did so literally watching the life ebb out of Joy. I am sad that she's not here to see me out the other side, but I know she'd be proud. Drew, I know you're a bit bemused by the whole PhD thing but you told me from my earliest childhood, 'you go for it, girl!'. I have. In my now – Jim, there are not enough words – your belief, patience, intellectual engagement, and love have nourished me daily. Mostly thanks for the tramping trips – you know me so well and picked the right moments to help me live in my body, so that I couldn't be living only in my head. Jackson, Finn and Stella – all of you have taken charge of your lives and gotten loved-up in the timespan of this thesis – it's so cool to see you all flourish! I have deeply appreciated your advice to "hang in there" along the way. And now, on to my next – this thesis has been bookended by the greatest cycle of all, and although it began with a passing over, it ends with us all looking forward with great excitement to the birth of our first grandbaby. No better reason to finally get finished.

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Research Dissemination

During the period of the conduct of the research and writing of this thesis, the results have been and will be disseminated in the following ways:

Miller, S., Davis, D. & Maude, R. (2020). First birth in Aotearoa New Zealand: Does having access to 'bells and whistles' influence the likelihood of normal birth? *Abstract accepted for oral presentation. International Confederation of Midwives Triennial Conference, Bali, 21-25 June, 2020.*

Miller, S., Davis, D. & Maude, R. (2020). Labour augmentation in low risk first time mothers giving birth in a tertiary hospital in Aotearoa New Zealand: An observational study including audit. *Publication reviewed by Women and Birth, currently attending to requested revisions.*

Miller, S., Davis, D. & Maude, R. (2019). Should well first-time mothers be giving birth in the tertiary maternity setting? Findings from a clinical audit and implications for practice. *Oral presentation, Joan Donley Midwifery Research Forum, Palmerston North, New Zealand, 12 September, 2019.*

Miller, S., Davis, D. & Maude, R. (2019). First birth in a high-tech setting in Aotearoa New Zealand: How the unit culture influences the likelihood of normal birth. *Oral presentation, Normal Birth Conference, Grange-Over-Sands, UK. 19 June 2019.*

Miller, S. (2018). Labour dystocia audit. *Oral presentation to the Multidisciplinary Meeting of Obstetricians and Midwives at the study site, 7 March 2018.*

List of Abbreviations and Glossary

MSC	Midwifery Shift Coordinator – a senior midwife who has responsibility for coordination of the shift.
LMC	Lead Maternity Carer – usually a community-based midwife (but may be a general practitioner or private obstetrician) who coordinates pregnancy, birth and postnatal care
STMW	Student midwife
SMO	Senior Medical Officer/Obstetric Consultant
COD	Consultant of the Day
CMW	Core Midwife – a hospital-employed midwife, who works rostered shifts, supports LMCs and women with complexity
PROM	prolonged rupture of membranes
ARM	artificial rupture of membranes
CTG	cardiotocograph
Marae	a communal and sacred meeting ground which provides a focal point for eating sleeping, religious and social practices within Māori society
Tāne	Māori men
Wāhine	Māori women
Tangata whenua	(literally, the people of the land), indigenous people of Aotearoa, Māori
Te Ao Māori	a Māori world view
Mana	respect, prestige, honour
Whanau	birth, or a family group
Tohunga	healer, spiritual guide

Chapter One

Introduction

I drive into the underground carpark... already these pangs in my gut are threatening to overwhelm me... it's dark down here, low ceiling, dim lights, and I wonder which is the quickest way in. Yes, I've been here before for a look around, but today my state of mind and impending task disorientates me. I find a park close to the lift, but for some reason I can't bring myself to get out of the car. I feel a bit paralysed by the thought of what lies ahead, I have never done this before, I hope everyone will be nice to me. My heart is pounding and I have a sort of sick feeling, but there's no going back now. The scene is set, I am on the path of a process that will just roll out however it may. I felt well-prepared for this, until now, when it's actually happening. I've worked hard over the last few months to ensure I know what to expect about coming here. I remind myself that, no matter how hard this is, it is time finite. Some have said this will be a transformative process and my life will be changed by it. Others have nodded knowingly, and just talked negatively about the hard work ahead. I steel myself, determined to be as strong as I can, stumble out of the car and push the button on the lift. Nothing. A sign says 'Delivery Suite Assistance and After Hours Access. Please use the Red Phone'. I finally make it to the Birthing Suite door, another buzzer, 'please press once and wait to be admitted'. The sign on the door admonishes me, 'do not pull on the doors' although it does say 'please'. I just want to get in, and get on with it, despite now feeling stricken with apprehension about what's beyond that door.

Some of the best ethnographic writing I have encountered begins with an 'arrival tale.' The women I spoke with who came in labour to the tertiary hospital to give birth to their first babies all storied their journeys to the birth room during their conversations with me. You may be thinking that you have just read one of them but no ... this is my own arrival tale, retold from my reflective journal and written on the day I began my period of non-participant observation in the Birthing Suite of this same tertiary hospital, where my research was based. The women's tales were not unlike my own, expressing an undertone of apprehension, of mildly unwelcoming, obstacle-ridden access. "Bobbie"

appreciated the handrail in the hallway that enabled her to lean heavily and grip hard during a contraction while she waited for access to be granted. I too had appreciated the efforts of a few individuals who had smoothed my path, who were keen to let me in. I sensed multiple agendas from those who were facilitative, and those who were not. Some welcomed my presence because they proved keen for me to expose some aspects of their working worlds they found a bit problematic, and others were not so keen for precisely the same reasons – the potential exposure of their working world. The problem that brought me to *their* place was not unique to their place, which made it worth exploring in case what was surfaced there might have resonance for other such birthplaces. I am a midwife with almost thirty years practice experience, and also an educator of both pre- and post-registration midwives for the last ten years. Over time I have grown increasingly discomforted by the stories I hear from women and student midwives, and the trends I have observed in my own practice, of the ubiquity of interventionist practice for well women having their first babies.

The problem statement

We have a problem in Aotearoa, (New Zealand) which is that only 23 percent of women who are giving birth for the first time, experience a normal birth with no interventions (Ministry of Health, 2019). This has huge resource implications for public health funding. But much more crucially, how a woman feels about her first birth experience, and what has occurred for her physically has far reaching implications for her mothering, her future childbearing, her family and her community. Arguably, how her birth unfolds is more strongly influenced by her choice of caregiver and the place she chooses to give birth, than by her own vision and planning for a safe and satisfying experience. Giving birth within a tertiary facility, geared towards and excelling at the provision of high-risk maternity care, is potentially problematic for well women with uncomplicated pregnancies, because of the culture of risk-aversion associated with obstetric-led care in such environments.

The available data confirms poorer birth outcomes for well women who opt for a tertiary setting for birth over home or primary units. Coupled with knowledge of the widespread use of labour augmentation procedures in the care of this group of women - and the outcomes associated with this - I felt compelled to investigate what might be driving this situation. This would necessitate a multi-faceted approach and, at least at the beginning, a broad research question. While some valuable information can be gleaned from examination of annual clinical reports, the numbers only ever represent a

small part of the picture. Hearing from birthing women, midwives and doctors can help to round out this picture, adding some flesh to the bones of the outcome data. But to more holistically appreciate the nuance of how the birth environment shapes the experience of women giving birth within it, deeper questions evolve which require a level of immersion in the everyday lives of those who give birth and work there.

The broad question underpinning this research is

“How does the culture of the tertiary maternity setting influence the augmentation of spontaneous labour for well women giving birth for the first time?”.

The Study Aim

This research aims to explore the cultural landscape of the tertiary birthing suite and in doing so to identify the generative mechanisms that influence the likelihood of labour augmentation for well first-time mothers.

To address these aims, a series of sub-questions link to the study’s objectives which are:

- * to describe a snapshot of current practice and identify compliance with the Labour Dystocia Guideline in current use at the facility
- * to explore decision-making about labour augmentation from multiple perspectives
- * to observe how power, relationships, structures and the birthing environment influence decision-making about labour augmentation.

This research, a critical realist ethnography, explores how the culture of one tertiary-level maternity setting shapes the interactions between those who give birth for the first time there, and those who work within it. Understanding the cultural nuance of this space for birth and considering the underlying mechanisms working in concert that increase the likelihood of interventionist practice, could enable the development of strategies of resistance leading to reduction in the use of unnecessary interventions. A tertiary maternity hospital in an urban setting was selected for the research because such sites report the lowest normal birth rates for first births both locally and internationally, yet they remain the choice of birthplace for the majority of low-risk women who have access to them, despite no requirement for this level of clinical care. Given this reality, we need to focus on strategies that will make the experiences of women and clinicians better within this environment, alongside continued promotion of

primary (midwifery-led) units and homebirth as safe and enabling birthspaces for women who are well.

Within this tertiary setting, I conducted a close exploration of one birth intervention, the augmentation of labour. Labour augmentation represents a *tipping point*, arguably where 'normal' becomes 'not-normal', so is a perfect moment to examine the nexus where belief systems collide and the potential for the unravelling of a woman's birth experience is unleashed. A breach of the nested cocoon - the woman-midwife relationship working within the culture of the birthspace - necessarily occurs at the point of labour augmentation, because engagement with the midwifery coordination and obstetric staff is required. This engagement lifts the woman's experience more tangibly into the purview of others. While positioned within an obstetric narrative which claims that augmentation procedures expand the possibility of spontaneous vaginal birth in the situation of slow labour progress, these interventions increase risk for the woman and her baby. It is important to acknowledge at the outset that although the augmentation of labour was the focus for this research, as is wont to happen with such enquiry the examination of augmentation acted as a kind of prism, by illuminating a more diverse array of insights regarding the ways that the environment for birth is produced by the interacting mechanisms of personal, social, economic and political forces.

The theoretical position of critical realism underpinned the design and analysis of the research. Critical realism asserts that there are things about the world that exist irrespective of our ability to know them empirically. What is visible and therefore able to be measured empirically arises from underlying or 'real' *generative mechanisms*, which play out in 'actual' events and processes. It seemed reasonable to wonder whether the layered ontological structure which has helped us to understand and explain labour progress (or dystocia) (Walsh & Evans, 2014) might be applied in a wider sense. If the mechanisms involved in generating and reproducing an organisational culture can be identified, there is potential to harness their transformational potential to reduce the inappropriate application of birth interventions for healthy women birthing their first babies. To contextualise the research, this introductory chapter presents the background relevant to the project, followed by a description of the overall structure of the thesis.

Background to the study

Giving birth in Aotearoa New Zealand

The maternity system in Aotearoa New Zealand is introduced here in order to provide the broad context for the reader who is unfamiliar with how a woman and her selected Lead Maternity Carer (LMC) work within the maternity service, and interface with it operationally.

Women giving birth for the first time in Aotearoa New Zealand have a range of options available to them regarding birth place. They can choose to give birth at home, in a primary birthing unit, or at a secondary or tertiary hospital (Ministry of Health [MoH], n.d.). Not all options are available in all areas of the country, but nationally in 2017 (most recent figures) 1.8 percent of first time mothers gave birth at home, 7.0 percent in a primary unit, 43.8 percent in a secondary hospital and 47 percent in a tertiary hospital (MoH, 2019). Although these figures are reported by parity, it is unknown what percentage of first-time mothers chose each setting as a *planned*, versus an *actual* birthplace. The Maternity and Midwifery Provider Organisation (MMPO) database, in the five years between 2006 and 2010, recorded outcomes for 28 491 low risk first time mothers. Among this group, 4.5% planned homebirth, 13.3% planned primary unit birth, 48.8% secondary and 33.4% tertiary hospital births (Dixon et al, 2014).

Using the Ministry of Health definition of normal birth (spontaneous onset of labour, no augmentation, no epidural, no episiotomy, spontaneous vaginal birth) only 22.2 percent of first-time mothers in Aotearoa New Zealand achieved a normal birth in 2016 (most recent data at the outset of this research). The emotional and physical well-being implications for women, and the resource implications for our health service, make this a priority area for research enquiry.

Maternity care in Aotearoa New Zealand is provided by a Lead Maternity Carer (LMC) who is usually a midwife but may be a general practitioner (family doctor) or an obstetrician. Women can expect that their LMC will engage them fully in the planning of their care, with negotiated decisions based on informed choice and consent as the underpinning principle (Health and Disability Commissioner, n.d.; New Zealand Government, 2007). All practitioners are required to uphold these principles. So it should be anticipated that for healthy women giving birth for the first time, outcomes across all settings and all practitioners would be fairly consistent. This does not appear to be the case.

The main document that discusses maternity outcomes for women 'considered to be at low risk of complications'- the Ministry of Health's Report on Maternity (MoH, 2017b) does not actually define what a low risk pregnancy is. Similarly, the two documents which give guidance to clinicians about provision of services to pregnant women in Aotearoa New Zealand, the Primary Maternity Services Notice (New Zealand Government, 2007) and the Guidelines for Consultation with Obstetric and Related Medical Services (MoH, 2012) also do not contain a definition of low risk pregnancy. Indeed, a low risk pregnancy is most likely determined by the absence of factors that are perceived to increase risk, rather than the presence of factors that might lead a woman and her caregiver to anticipate a normal pregnancy outcome. "Well women with uncomplicated pregnancies" as a phrase to describe low risk women has been promoted as being "universally understood" (Maude, 2012, p. 5). There is general acceptance that this includes women whose pregnancies are between 37 and 42 weeks gestation, with one baby in a head-first (cephalic) presentation, and for whom no prior or current medical or surgical conditions have required the offer of referral to a specialist obstetric service. With regards to labour, the additional element of spontaneous onset of labour is included.

Data from Aotearoa New Zealand demonstrate that low risk women giving birth for the first time are significantly more likely to achieve a spontaneous vaginal birth, and receive fewer interventions when birth is planned to be at home or in a primary unit, than when planned in secondary or tertiary facilities (Davis et al., 2011; Farry, 2015; Miller & Skinner, 2012). Internationally, this phenomenon is echoed in countries with comparable demographic profiles and integrated maternity systems (Birth Place in England Collaborative Group, 2011; Hutton, Reitsman & Kaufman, 2009; Scarf et al., 2018). Understanding the complex matrix of factors that influence the disparity in outcomes between birth settings could shed light on practices that contribute to higher rates of intervention in secondary and tertiary settings, thereby offering the possibility to strategise for improvements in outcomes for women and babies.

The area of focus for this study is that of the augmentation (artificial acceleration) of labour using artificial rupture of membranes (ARM) and/or synthetic oxytocin infusion. These decision points are a nexus in terms of being an expression of how the culture of the birth environment impacts on women's experience along with the somewhat inconvenient truth that birth is, on some occasions, not completely straightforward despite being a 'natural' process. Few would argue that for women undergoing an induction of labour, augmentation is an expected component of that 'package of care'. But for low risk women whose labours begin spontaneously, and who therefore can

reasonably expect a 'normal' labour trajectory, currently at least 29.8 percent of women giving birth for the first time in Aotearoa New Zealand are having their labours augmented (MoH, 2019). This figure includes the artificial rupture of membranes used as a strategy for accelerating labour, but not the additional 27.6 percent of women whose first labours are induced and frequently also augmented with an oxytocin infusion (MoH, 2019).

Combined, therefore, in Aotearoa New Zealand more than half of all women and their unborn babies are exposed to synthetic oxytocin during labour. As a mammalian species, in an evolutionary sense it seems unlikely that more than one-third of mothers 'need' labour augmentation, and numerous studies confirm that synthetic oxytocin is frequently used when there is no clinical indication (Berglund et al., 2010; Bernitz et al., 2014; Nystedt & Hildingsson, 2014; Petersen et al., 2010; Selin et al., 2009).

The international situation is no different. Recent studies have reported increasing prevalence of the use of oxytocin augmentation worldwide, with estimates ranging from 37-75% among first time mothers in spontaneous labour at term with a single cephalic fetus (Bernitz et al., 2014; Buchanan et al., 2012; Kjaergaard, Foldgast & Dykes, 2007; Selin et al., 2009). Some studies report that 40 to 50% of women were augmented without a diagnosis of labour dystocia (Bernitz et al., 2014; Selin et al., 2009). It is well understood that the 'too much too soon' phenomenon (where there is routine over-medicalisation of birth) is not serving the interests of women in high income countries any better than 'too little too late' is serving women in low and middle income countries (Miller et al., 2016). As Henci Goer, a prominent medical author who writes prolifically about evidence-based maternity care suggests, "If this many women require augmentation for abnormal progress, then something is wrong with the definition of normal" (Goer & Romano, 2012, p. 207). Therefore strategies to reduce the unnecessary use of birth interventions should be implemented in contexts where these can be identified.

Currently no consistent data capture mechanism in Aotearoa New Zealand reports the rates for augmentation of labour for women planning birth in different settings so it is unknown whether the setting for birth positively or negatively influences the likelihood of augmentation. Examining the processes that influence whether a woman will be offered, and will accept or decline, augmentation procedures during spontaneous-onset labour might yield opportunities to address practice in the tertiary setting that is non-evidence-based in this regard. Identification of beliefs, attitudes or institutional constraints that affect practice could lead to a reduction in miss-application of this

technology, and increased awareness of measures that better support physiological birth.

Structure of the thesis

This introductory chapter explains the impetus for the research and introduces the research question and the study aims and objectives, which are revisited later in the thesis. The previous brief description of the structure of the maternity system provides context for the reader unfamiliar with the maternity context in Aotearoa New Zealand.

Chapter Two examines the literature about the cultures of technocratic birth settings and how these cultures shape midwifery practice and birthing women's experiences. Although much is known about the impact of organisational culture on the application of birth technologies, what remains opaque is the extent to which the underlying interplay of the world views of women and clinicians and the ethos of the institution shape these processes and therefore what might be recommended to slow down the rise of interventionist practice – this is the gap this research aims to address. 'Normal' progress for first birth is explored to set the scene for describing labour dystocia and the interventions used to 'manage' slowly-progressing labour. A review of the benefits and risks associated with labour augmentation procedures follows, as evidence that supports my assertion that their use should be judicious, well-timed and based on clear clinical necessity. Lastly, the experiences of women, their partners and midwives in relation to labour augmentation are canvassed to provide a qualitative glimpse into their effects on women's birthing agency, partners' ability to 'be with' labouring women and midwives' ability to practice their craft.

The theoretical underpinning for this study is Critical Realism and Chapter Three – Methodology - describes how this theoretical perspective was harnessed not only to explore the reality of the tertiary birth context for well women giving birth to their first babies, but is also utilised as the analytic framework for presentation of the three results chapters. Critical realism asserts that 'coming closer' to knowing what is real can be achieved utilising a layered ontology which examines how empirical findings are generated by alignments between causative (generative) mechanisms (Bhaskar, 1975). These layers are called the *empirical*, *actual* and *real* dimensions. Epistemologically, coming to this understanding requires a methodology that champions the use of multiple ways of seeing. Data for this research was collected using ethnographic methods; beginning with a retrospective chart review including audit, and later including document analysis, semi-structured interviews with women,

midwives and doctors, focus groups with midwives and doctors, and a period of non-participant observation within the Birthing Suite of the tertiary hospital. The initial quantitative examination of clinical practice against the Labour Dystocia Guideline was designed to provide a snapshot of current practice which illuminated the scope of the clinical problem and confirmed a hunch about the over-diagnosis of dystocia and unnecessary use of labour augmentation procedures. An account of the selection of data collection methods is given in Chapter Three, followed by a description of how analysis and triangulation of the data genres took place. These analyses were recursive, using inductive, deductive, abstractive, and retroductive approaches. Further, the analysis process incorporated all the writing and thinking that took place around and alongside the data collection processes in the form of my field notes, reflective journaling and the actual writing of this thesis.

Chapter Four - Methods - presents the detail of the data collection methods, recruitment and implementation of each aspect of the study and considers the ethical dimensions which were complex due to the multiple methods of data collection. This description provides a clear audit trail which enables other researchers to assess the robustness of my processes. To conclude the methods chapter my voice as the researcher is considered more fully in a section about my reflexivity and positionality within the project and other aspects of study rigour are addressed.

To provide a more focussed context for the research Chapter Five presents a description of the study setting and introduces the women, midwives and doctors whose experiences and insights inform the study findings. Chapter Five thus provides the backdrop to the ensuing three data chapters by describing the daily rhythms and rituals of the birthing suite alongside descriptions of the characters who visited and worked within this birthspace during the timeframe of this study.

The study results are then presented over three 'data chapters' (Six, Seven and Eight) which represent the three ontological levels of the critical realist theoretical and analytic framework. Each of these chapters present the analysed data interspersed with some interpretation when directly relevant to the analysis. These chapters are therefore fulsome but they mitigate against requiring an extensive and encompassing overall discussion chapter, instead allowing a focussed and forward-looking blueprint to achieving change in the concluding sections of the thesis.

Moving from the detailed description of the study setting in Chapter Five, Chapter Six begins with a critique of the Labour Dystocia Guideline which was utilised to assess practice. This provides some insight into the institutional ethos surrounding labour augmentation and leads to the results from the retrospective chart review and audit. These are followed by presentation of some data from my conversations with women, midwives and doctors. In ethnography where the voices of many are sought, deciding whose voice to privilege and how to do so requires consideration. I made a deliberate choice to privilege the voices of the women and midwives who took part in this study. This was partly pragmatic as the doctors were less enthusiastic about participating, and partly as an active strategy to re-balance the power differential involved in research that is designed to critique dominant structures by giving voice to those less often heard. The narratives of the women provide most of the heard voice in Chapter Six. Their journeys to the birthroom are explored and decision-making processes once there are discussed, in order to set the scene for examining how being 'in the space' was shaped by the needs of the institution more firmly than by the needs of the women themselves. Women's and clinicians' understandings about labour progress are then described and the dimensions of labour support that were helpful to the women are outlined. This chapter thus speaks to the *empirical level* of the study's ontological structure, by examining outcome data from the chart review and audit, the 'talk' data from the interviews and focus groups, and some of the 'seen' data from the observation.

Reflecting events at the *actual level* of the ontological structure, Chapter Seven presents some known but sometimes unseen influences of the tertiary birth setting and how they shape the experiences of labouring women and the practice of midwives and doctors within it. Like Chapter Six, this chapter holds tightly to the data derived from the conversations with women, midwives, and doctors and my field notes and reflections. The findings in this chapter coalesce around two key concepts within this birthing environment – the place and the people - and so are presented under these two over-arching topic areas. Although some data used within this chapter does not strictly relate to the augmentation of labour *per se*, it does provide important contextual insight about the cultural nuance of the study setting.

Chapter Eight is the last of the data chapters. Whilst still drawing on data from the study it is necessarily more speculative, as it proposes the generative mechanisms and explores the ways they conjuncturally shape the unit culture and reproduce the constraining and enabling forces that influence women's experiences. This chapter

draws on more abstractive thinking processes, where my knowledge as a practitioner in the field has been harnessed to posit possible explanatory mechanisms for what was found. The identification of the mechanisms is data-driven, but the discussion expands to proffer some possibilities for resisting the reproduction of the mechanisms in ways that hinder normal birth, by instead focussing on how the social actors might make different choices about manifesting them. This chapter considers the *real* of the theoretical and analytic frameworks for the study.

Chapters Nine and Ten draw together the insights from the study and offer a way forward that might more successfully enable well women giving birth for the first time to achieve intervention-free births within the context of the technocratic tertiary maternity environment. The limitations and strengths of the study are acknowledged, and recommendations for further research and practice are offered. A concluding statement brings the whole to a close.

Summary

Having described the broader context of the current situation with respect to the use of labour augmentation, I believe that further exploration of the topic is warranted. Augmentation for labour dystocia is frequently used for well women giving birth to their first babies in Aotearoa New Zealand. So what constitutes normal labour progress, then, if the application of these interventions is so commonplace, and how is the culture of the birth environment even relevant to whether augmentation is likely to be offered? The following chapter reviews the literatures that have already examined these questions and reveals areas that remain to be explored about this phenomenon.

Chapter Two - Exploring the Literature

Introduction

Chapter One provided some background necessary to establish an overall context for the study. Chapter Two examines the relevant literature backgrounding both the tertiary maternity hospital as a cultural environment for birth and a more specific focus on the study topic area – that of normal progress for first birth and its flip-side labour dystocia. This is followed by an exploration of labour augmentation *per se* which includes examination of augmentation procedures, their benefits and limitations and concludes with descriptions of women's and clinicians' experience of labour augmentation. The purpose of the chapter is to highlight how labour augmentation, while positioned by medicine as a relatively benign conduit to improving the chance of spontaneous vaginal birth, is by no means risk-free and therefore should be used judiciously and only in the presence of clear clinical need. In a cultural context for birth that promotes the use of technology and pharmacology, permissive use of this intervention is enabled. Extant literature tells us much about the implications of widespread use of augmentation procedures but little research attention has been paid to how the environment for birth contributes to the application of this particular technology. Thus the research gap this study addresses is further illuminated and the research question, study aims and objectives are reiterated.

The culture of the tertiary birth setting

Over the last decade a proliferation of studies has examined workplace culture within technocratic maternity settings. Workplace culture is defined as incorporating the "shared ideas, customs and social behaviour of a particular group of people or community" (Catling, Reid & Hunter, 2017). Much of the literature has emerged from the UK, USA, Canada and Australia, and whilst there are several parallels to the context in Aotearoa New Zealand, there are also some significant differences. The low risk first time mother who spontaneously labours in the context of my study is typically working with a known Lead Maternity Care (LMC) midwife to plan and implement her maternity care. It is usual for them to know each other well, and to be engaged in negotiated decision-making about birth planning so that both are aware of the woman's needs and preferences. In other countries, while this is increasingly the case there remain large populations of such women who are admitted to hospital under an obstetric-led model of care, and where the midwife providing labour support will be meeting the woman for the first time.

Regardless of these potential differences, studies which have explored (western biomedical) maternity workplace cultures provide a consistent picture of a 'production line orthodoxy' (Walsh, 2006) which limits midwives' ability to provide care in a manner consistent with their philosophical beliefs about the normal physiology of birth. This tension between one's practice realities and desired way of being is called cognitive dissonance (Festinger, 1957). Frith et. al. (2014) completed a scoping review which included sixteen studies focusing on how the culture of organisations influenced maternity care and concluded that organisational factors are crucial determinants that affect the practice of staff in hospital maternity settings. In these birthspaces women are 'processed' rather than 'cared for', and midwives believe that busy-ness is at odds with a midwifery model of care.

Catling et al. (2017) suggest the "unconscious enactment of beliefs are what staff, visitors and patients 'feel and observe'" and that this is "often more powerful than what is articulated by the organisation" (p.138). The 23 midwives interviewed in their qualitative descriptive study expressed frustration with their workplace cultures and had developed some strategies to manage their frustration. Although they sometimes felt bullied, these midwives could articulate ways of supporting one another to build resilience – creating social capital. They described feeling fatigued and powerless sometimes, "hampered by the environment" (p. 139) but strongly expressed their love of midwifery and the importance of supporting one another. Finding it hard to practice "real midwifery" (p. 142), these midwives engaged in strategies for protecting women's experience by being selective about reporting progress. While this behaviour is understandable, it does beg a question about midwifery's complicity in maintaining the status quo by legitimising the practice guidance of the medical model in this way, rather than utilising midwifery-derived knowledge that supports women's unique normalities and individual labour processes.

A focus on risk aversion and an "assumption of abnormality" also characterise the technocratic maternity environment (Carolan-Olah, Kruger & Garvey-Graham, 2015; Healy, Humphreys & Kennedy, 2017). A social model of birth accepts risk as a part of everyday life, but the transition to a biomedical model transforms risk into something that should be managed and controlled, even avoided completely where possible. Thus, caregivers increasingly use techniques of surveillance and intervention that are often unnecessary (and which may themselves involve risk) in response to professional and institutional requirements for risk mitigation. Working a "birth is

normal” philosophy within a “birth is risky” paradigm (Skinner, 2011) can result in the erosion of the midwifery role (Healy et al., 2017). When skills such as the finely-honed palpation and auscultation skills of the midwife are replaced by technology – such as cardiotocography - in terms of accuracy in identifying and reducing adverse outcomes for babies, machines and Artificial Intelligence have not proven more efficacious than people (Balalya & Shrem, 2019; Graham et al., 2014).

In ‘high-tech’ medicalised birth settings, Healy et al., (2017) argue that policies and guidelines may subjugate the integrity of women by placing a high priority on perceived risks – with *action*, as opposed to *inaction* being seen as protective against dysfunction. This manifests as ‘prophylactic’ use of synthetic oxytocin, as one example, to pre-empt labour dystocia and prevent caesarean section (Brown, Paranjothy, Dowswell & Thomas, 2013). Carolan-Olah et al., (2015) similarly report that midwives feel compelled to ‘do’ rather than ‘not do’ and noted that supporting women to give birth normally required more effort from midwives. This was because working closely with women to support them to manage labour using water, birth equipment, intermittent auscultation and intense physical presence required more of midwives than ‘settling’ a woman with an epidural and a CTG machine. Provision of relational care therefore increases organisational demands around staffing, administering breaks and so on, but ultimately enables midwives to have increased satisfaction in their work and women to have a better chance of achieving a normal birth.

In the context of my study, the woman and her LMC midwife are in a sense ‘within but outside’ this cultural milieu. The LMC midwife may require only brief assistance from core midwifery staff for breaks, unless the woman’s labour becomes complex and engagement with the obstetric team becomes necessary, so LMC midwives are well placed to provide this intense supportive presence without jeopardising the smooth running of the Birthing Suite. This is a clear point of contextual difference between the Aotearoa New Zealand setting and international studies which have examined the same phenomenon, and justifies examination of how this “bubble within the bubble” (Miller, 2008) of the technocratic birth setting is enabled or constrained in terms of supporting physiological birth.

The impact of the hospital environment on birthing women and their supporters

Being under surveillance, feeling disrespected and disbelieved are frequently described in qualitative studies that have examined women's experiences of their care in hospital maternity settings (Nilsson, 2014; Simpson & Catling, 2016). Nilsson (2014) found that women were left feeling that their bodies were inadequate at giving birth, because technology was used to start and complete their labours, and assess their baby's well-being, rather than them being able to rely on their own birthing capacity and 'knowing' about their bodies and babies. In this space, the staff trusted technological tools for ensuring a safe 'delivery' over women's ability to give birth. The birthing room thus became a site of fear and unsafety for them. Davis and Homer (2015) explain how the hospital setting encourages women to behave differently by centering the obstetric bed in the room, which invites a passive rather than active response to labour. The well-documented Fear Cascade (Stenglin & Foureur, 2013) demonstrates the ways in which women's birth physiology is transformed and inhibited by her hormonal response to being in an unfamiliar and potentially threatening environment. Catecholamine release can inhibit the secretion of oxytocin which results in decreased strength (and therefore effectiveness) of contractions and decreased blood flow through the placenta resulting in a propensity towards developing labour dystocia and fetal distress (Foureur, 2008; McEwen, 2007).

Of course, it is not only labouring women who feel the effects of the birth environment. Johnson (2002) outlined how under-preparedness and obligatory role-adoption negatively affected men's experience of attending births in hospital. The "alien environment" (p. 176) contributed to their sense of discomfort. Some men have described feeling left out, powerless, helpless to assist and at the mercy of the caregiver (Nystedt & Hildingsson, 2018) when attending the births of their babies in hospital. Driesslein, (2017) described men's presence at hospital birth as "a potential for failure at masculinity" (p. 464) and contrasted this with accounts from men who have supported their wives/partners at homebirth, who have appreciated the opportunity to exhibit nurturing and serving behaviours. This is an interesting contrast with the hospital-birth experiences of the nonbiological mother during the birth experiences of lesbian couples, where the birthing women's partners reported feeling very included and actively encouraged to be involved in labour care provision and baby-care following birth (Buchholz, 2000).

The impact of the hospital environment on midwives

Midwives have described how the setting they provide labour care in shapes their practice and decision-making. Their use of space and time is different. Their sense of 'doing to' prevails over their sense of 'being with' labouring women when they are supporting women in hospital, as opposed to home settings. What feels 'safe and unsafe' is different (Miller, 2008). Healy et. al., (2017) found that "viewing pregnancy through a risk-lens" (p. 367) as the result of increasing medicalisation of birth has jeopardised the central role of midwives in taking responsibility for normal labour and birth care. Dutch midwives who participated in focus groups discussing their attitudes towards physiological birth recalled feeling the need to "account for their actions, including those associated with promoting physiological childbirth" (p. 69) when practicing in the hospital setting, which contrasted with their strong sense of personal autonomy when supporting women who laboured outside the hospital (Thompson, Nieuwenhuijze, Low & de Vries, 2016). De Vries (2004) similarly reported Dutch midwives feeling that they were "a different person" when working within the hospital setting.

Changes in midwifery behaviour can be attributed to both the ambience and the built environment. Emotional and cognitive responses were described by midwives in a photo-elicitation study conducted by Hammond, Homer and Foureur (2014), where the clinical aesthetic of the birthing suite environment influenced midwifery practice to be more medicalised, with a higher expectation for the use of interventions. These midwives described feeling more anxious, sad, tense, conflicted and physically uncomfortable in the hospital birthspace, in contrast to their feelings of freedom, relaxation, comfort, confidence, normalcy and safety when practicing in a midwifery-led birthing unit. These findings are resonant with several other studies which have examined midwifery practice in different settings (Hammond, Foureur, Homer, & Davis, 2013; Hunter, 2000; 2017; Miller & Skinner, 2012).

In their metasynthesis of 14 studies which examined midwifery practice in public hospital settings, O'Connell and Downe (2009) concluded that midwives' intention to provide *real midwifery* was overwhelmed by their workloads and expectations on them to provide equitable care for all. Cognitive dissonance, the tension between one's espoused beliefs and the ability to action them congruently, was described by midwives in relation to their practice in medicalised birth settings (Griffith, 1996; Hunter, 2000).

The hospital setting can thus compromise both women's and midwives' attempts to 'get birth right'. When a woman is giving birth for the first time, the environment for birth should ideally be one that enables time and is sufficiently supportive to promote physiological labour. Getting first birth as 'right' as it can be is so important.

Why it matters to 'get birth right' first time

The psychological and physical sequelae of a woman's first birth experience, whether it be perceived as positive or negative, heavily influence the woman's decisions for her future maternity choices.

In terms of her emotional well-being, a perceived negative birth experience (which has often resulted in assisted or surgical birth) influences whether women will delay or perhaps even avoid a subsequent pregnancy. Post-traumatic stress disorder (PTSD) and tokophobia are increasingly reported, alongside challenges to relationships between the woman and her baby, or the woman and her intimate partner, and a reduction in the ability to meet the daily needs of her family (Bahl & Strachan, 2004; Bell & Andersson, 2016; Gotvall & Waldenstrom, 2002; Haines, Rubertsson, Pallant & Hildingsson, 2012; Greer, Lazenblatt & Dunne, 2014; Mercer, Green-Jervis & Brannigan, 2012; Olde, van Der Hart, Kleber, & van Son, 2006; Simpson & Catling, 2016). Women who have experienced surgical birth also contend with having a 'high risk' label for their future pregnancies, which can affect both the care available to them and their own sense of themselves as capable birthing women. As an example, in 2017, of 464 women at term who had previously given birth by caesarean section in the setting of this study, 60.6% chose to have an elective repeat caesarean section, and of those who laboured a further 19% had a repeat caesarean section in labour (DHB, 2018).

In physical terms, a subsequent pregnancy may be more likely to include placental complications, sub- or infertility or even stillbirth if a caesarean section was the outcome of the first birth (Dahlen et al, 2013; Nezhad, Falik & Li, 2017; Odent, 2012; Smith, Pell & Dobbie, 2003). Faecal or urinary incontinence can result from assisted vaginal birth (Johanson et al., 2014). More recent evidence supports hypotheses related to disturbances to the microbiome and inter-generational epigenetic sequelae related to birth interventions (Almgren, et. al., 2014; Dahlen et al., 2013). So how does labour augmentation contribute to rates of other interventions in birth? Augmentation is commonly recommended when a woman's labour progress is deemed too slow – this is called labour dystocia.

What is 'normal' progress for first birth?

Attempting to synthesise the evidence to discern the 'normal' length of labour for a woman giving birth for the first time appears fraught. Giving birth is a highly individualised process and the factors that influence the length of a woman's labour are myriad and interwoven. Over time, many scholars have proffered their opinions about the 'ideal' length of labour. An early work published in 1888, suggested permissively that

“...it is much better to keep about and busy one's self in some way as long as may be. It is, in most cases, several hours after the pains commence before the mouth of the womb becomes sufficiently dilated for the 'sac of waters' to be formed; and in first labors it is usually, but not always, much longer than in subsequent ones...during [the bearing down stage] she will be importuned by the attendants to “bear down forcibly”...that is a very bad practice; to do so will greatly fatigue the woman but does not hasten the labour. She will soon be obliged to bear down, and then it will be useful... Sometimes it [the placenta] does not pass off for several hours...but it is a delicate matter for a person not well instructed in the business to attempt to remove it... it will be much better to wait many hours for the efforts of nature to eject it, than to run any risk of injury from its forcible removal by any but a skilful accoucheur.”
(Cowan, 1888).

Whilst Dr Cowan seemed relaxed enough about letting nature take its course, throughout the 20th and 21st centuries the pendulum has swung dramatically. Observational studies in the middle of the 20th century suggested that for nulliparous women, a cervical dilatation rate of 1.2 cm per hour once the woman exceeded 2 cm dilated was necessary for labour progress to be considered 'normal' (Friedman, 1955). Midwifery textbooks later in the century continued to espouse the 1cm/hr mantra for first time mothers (Myles, 1975), but latterly the pendulum perhaps over-corrected, with one 2006 textbook describing a birthing unit as advocating the removal of the clock from the birthing room “in order to do away with the constant surveillance of time”. This book opined that “the midwife should not limit the time of labour so long as the mother is comfortable, and the fetus is well, and there are reassuring signs of this. The essential criterion is that of progress” (Holmes & Baker, 2006, p. 216).

What constitutes “progress” then? Can it be measured only by objective means (increasing effacement, increasing cervical dilatation, increasing length, strength and frequency of contractions, descent and/or rotation of the foetus etc), or does this reductionist view with its overzealous application of the diagnosis of ‘labour dystocia’ commit too many women to obstetric intervention and their babies to unnecessary adverse outcomes? A brief exploration of the available evidence in relation to labour duration for first time mothers seems warranted.

Establishing a ‘normal’ rate of progress is complicated by a number of confounding factors, not least of which is that most studies that have observed this phenomenon have been conducted in hospital settings, where arguably the optimal conditions to study physiological birth do not exist. Many studies exploring labour duration have included women whose labours have been augmented, or managed with epidural anaesthesia, so attempting to define a mean length of labour in this circumstance is impossible.

Further, there is limited consensus in the research about what constitutes the onset of labour, with some studies favouring a particular ‘starting point’ in terms of either centimetres of dilatation of the cervix, or admission to labour ward, and others accepting women’s self-reports about when labour began. A ‘slowest-yet-normal’ rate of 0.5cm/hr of cervical dilatation once ‘active labour’ is established (for nulliparous women) has been proposed (Neal et al, 2010). Other researchers have cautioned against diagnosing labour dystocia prior to 6cm dilatation, suggesting that for some women labour only ‘establishes’ at around this dilatation. ‘No progress’ for four hours *after* this point would constitute dystocia in their opinion (Zhang et al., 2010). Hildingsson et al., (2015) reported a mean duration of 14 hours with women’s self-reported onset of labour (therefore including the ‘latent’ phase of labour). This study is the most likely to represent physiological labour progress due to the inclusion of (only) women planning homebirths and those who transferred to hospital in labour but who did not receive further labour interventions and gave birth spontaneously.

The cumulative impression of these and other studies is that labour progress for first time mothers is *highly* variable, often slower than previously reported and may be influenced by ethnicity (Albers, Schiff & Gorwoda, 1996), maternal age (Zaki, Hibbard & Kominiarek, 2013) and body mass index (Norman et al., 2012; Penfield, et al., 2016). Indeed, Penfield and colleagues have proposed that modelling the interactions between a range of demographic variables associated with a longer mean labour duration holds promising potential for reducing unnecessary use of augmentation

procedures. Individualising expectations for 'normal' progress in any given woman based on her demographic profiles might enable this (Penfield et al, 2016).

The World Health Organization recently produced their Recommendations for Intrapartum Care for a Positive Birth Experience (WHO, 2018). These recommendations considered the available evidence and identified updated definitions and timeframes for labour. The latent phase of labour is "a period of time characterized by painful uterine contractions and variable changes of the cervix, including some degree of effacement and slower progression of dilatation up to 5 cm for first and subsequent labours". Active labour is "a period of time characterized by regular painful uterine contractions, a substantial degree of cervical effacement and more rapid cervical dilatation from five cm until full dilatation for first and subsequent labours" (WHO, 2018, p. 35). According to these recommendations, first time mothers should be seen as making normal progress if, after five centimetres there is acceleration in the dilatation of the cervix, acknowledging that the period from five to ten centimetres may take up to twelve hours and still be normal progress. Whilst widespread adoption of these recommendations will hopefully result in fewer women being diagnosed with labour dystocia, they continue to presume a practitioner-led view of labour progress, which may not square with women's own views about either the onset of their labour or their experience of 'progress' (Dixon, 2018).

Midwifery scholarship has in some cases entirely rejected the notion of any such 'staging' in relation to labour progress, preferring instead to appreciate labour as a continuum, as defined by the woman (Dixon, Skinner & Foureur, 2013a; 2013b) and articulated as women's own descriptions of their emotional journey through labour which incidentally (and not surprisingly) mimics the hormonal cascades of their physiology. A spiral pathway that unfurls in a not-necessarily-linear fashion was proposed by Duff (2005). Within these models there is wide tolerance for variable 'progress' measures. The notion that labour onset and progress are determined by those who are *not the labouring woman* provides a conundrum. That 'others' define what is and isn't labour, and what progress 'should' be, rather than the person experiencing the phenomenon, threatens to undermine the woman's autonomy and belief in her birthing capacity.

Regardless of the difficulties associated with establishing 'normal' labour progress, the use of augmentation procedures to accelerate the labours of well first time mothers undoubtedly contributes to the increased use of other interventions, such as epidural use, assisted birth and caesarean section (Svardby, Norstrom & Sellstrom, 2007).

Augmentation procedures – are they really so bad?

Artificial rupture of membranes (ARM)

Amniotomy or artificial rupture of the membranes (ARM) is one of the most frequently performed birth interventions in contemporary midwifery and medical practice. ARM is used to speed up contractions and thus shorten labour, however is not recommended as a part of routine labour care in a normally progressing spontaneous labour or where labour is prolonged (Smyth, Markham & Dowswell, 2013). This systematic review concluded that there was no evidence that amniotomy shortened labour and there was a possible increased risk of caesarean section associated with the use of ARM. Other associated risks are increased maternal perception of pain and use of pharmacological pain medications, cord prolapse and fetal heart rate anomalies from cord compression, rupture of vasa praevia, chorioamnionitis and risk of birth injury such as lacerations to baby's scalp (Thorogood & Donaldson, 2015).

Oxytocin

Naturally-occurring or *endogenous* oxytocin plays a major role in a number of body systems. It is mostly produced in the hypothalamus and is secreted by the posterior pituitary gland. During labour, it is secreted in a pulsatile manner, where it acts on the uterine muscles to stimulate contractions. Other target organs include the breasts, brain, intestines, immune tissue, spinal column and heart (Bell, Erikson & Carter, 2014). Oxytocin has been associated with maternal stress reactivity, mood, and bonding behaviours such as increased eye contact between mothers and newly born babies, frequent reviewing of the baby by the mother, increased vocalisations and the presence of specific bonding thoughts straight after birth (Gordon, Zagoory-Sharon, Leckman, & Feldman, 2007). Oxytocin levels rise throughout labour and are at their highest in women just prior to and immediately following birth (Uvnas-Moberg et al., 2019). This is an important mechanism for protection against postpartum haemorrhage, but also for optimising maternal chest thermoregulation and skin sensitivity which is beneficial during skin-to-skin connection between the woman and baby following birth. When labour unfolds physiologically the orchestration of oxytocin (along with other hormones) ensures a smooth transition through labour and into early mothering, optimising maternal-infant interaction and setting up an environment for successful lactation and early neonatal life (Buckley, 2015). Neuroendocrine mechanisms are triggered because oxytocin is released directly into the brain, although endogenous oxytocin in the woman's circulation does not cross the blood-brain barrier (Uvnas-Moberg et. al., 2019).

Synthetic or *exogenous* oxytocin was first sequenced and produced in the 1950s. It is a neuropeptide consisting of nine amino acids, chemically identical to that produced naturally. Its use for labouring women has increased dramatically over the last fifty years, and now in most developed countries it is the commonest medication associated with childbirth. At least 57 percent of all women in the United States (Bell, et al., 2014) and 58 percent of first time mothers in Aotearoa/New Zealand (MoH, 2017b) are exposed to its use for the purposes of induction and augmentation of labour, let alone that almost all women in both developed and developing countries are given a bolus dose during the third stage of labour to 'facilitate' the birth of the placenta and prevent postpartum haemorrhage.

Judicious use of synthetic oxytocin can be beneficial during labour where there is evidence that an improvement in the strength and frequency of contractions will optimise labour progress. As a prevention and/or treatment for postpartum haemorrhage it has undoubtedly saved countless women's lives. However, there is mounting evidence about the potential risks of the use of synthetic oxytocin, both in the short-term labour context and also in regard to its longer term harms. It has been described as the medication "most commonly associated with adverse perinatal outcomes" (Rooks, 2009, p. 345). The Institute for Safe Medication Practices added it to their short list of medications "bearing a heightened risk of causing significant patient harm when used in error" in 2007 (Institute of Safe Medicine Practices, 2018). A number of studies report use of synthetic oxytocin when it has not been clinically indicated (Berglund, Grunewald, Pettersson, & Cnattingius, 2008; Bernitz et al., 2014; Petersen et al., 2010; Selin et al., 2009.) Arguably, even when used in accordance with the manufacturer's instructions, institutional and professional guidelines, it would appear that 'harm' can be caused in ways we are just beginning to appreciate.

Epigenetic research

Epigenetic research is increasingly focusing on the potential implications of 'disruption' to the oxytocin system of both women and neonates arising from exogenous oxytocin use. Disturbances to DNA methylation may result in gene expression disruption by 'silencing' gene transcription, and it has been postulated that this modification of oxytocin receptors plays a role in social behaviour and emotion disorders (Bell, et al., 2014; Cushing & Carter, 2000; Dahlen et al., 2013; Plothe, 2010; Witt, Carter & Walton, 1990). The first contact a maturing hormone receptor has with its target hormone determines the binding capacity of that receptor for life. Flooding the oxytocin receptors of the myometrium during birth produces down-regulation of oxytocin

receptors (Phaneuf, Rodríguez Liñares, TambyRaja, MacKenzie & López Bernal, 2000) and in a fetus exposed to synthetic oxytocin during birth this receptor saturation may result in faulty imprinting, with lifelong consequences (Bell et al., 2014).

The neuroscience community remains uncertain about the extent to which exogenous oxytocin can breach the 'leaky' fetal neurovascular unit – the blood/brain barrier (Ek, Dziegielewska, Habgood & Saunders, 2012; Kenkel, Yee & Carter, 2014; Saunders, Liddelow & Dziegielewska, 2012) but there is more certainty about oxytocin crossing the placenta (Bell et al., 2014; Malek, Blann & Mattison, 1996; Oosterbaan, Schwab & Boer, 1985; Oosterbaan & Schwab, 1989). Indeed, the flow of oxytocin is shown to be bi-directional, and probably occurs by simple diffusion (Ragusa, 2015). Animal studies suggest longer term endocrine consequences, with decreases in pair bond formation and caring for off-spring unrelated to the mother (allo-parenting) demonstrated in prairie voles exposed to intrapartum and postpartum oxytocin administration (Bales et al., 2007). Several studies have examined links between synthetic oxytocin use and cognitive spectrum disorders such as autism and attention deficit hyperactivity disorder (ADHD), with some reporting increased incidence (Wahl, 2004; Weisman et. al., 2015) whilst others deny a link (Guastella et. al., 2018). Irrespective of where the scientific consensus ultimately arrives, it is clear that there are potentially harmful outcomes for women and babies associated with synthetic oxytocin use.

Effects on the woman

Mode of birth

Liberal use of synthetic oxytocin during labour initially appeared promising as a way to reduce the incidence of prolonged labour. Early studies of active management protocols (early amniotomy followed by early oxytocin infusion), which aimed to prevent dystocia during the first stage of labour demonstrated low caesarean section rates, and high rates of labour completion within 12 hours (O'Driscoll, Jackson & Gallagher, 1969). But over the last four decades and across the globe, caesarean section rates have risen sharply despite widespread use of synthetic oxytocin for this purpose, and today its use is firmly implicated as being associated with increased rates of assisted and surgical birth. A common outcome of oxytocin use is tachysystole and hyperstimulation, both of which may contribute to fetal distress resulting in a need for expedited birth (Bakker, Kurver, Kuik, & Van Geijn, 2007; Gilstrap & Sciscione, 2015; Heuser et al., 2013; Simpson, 2011).

Bugg, Stanley, Baker, Taggart and Johnston (2006) concluded from their five year incidence study of spontaneous-onset labour in nulliparous women, that 51% of women who were exposed to synthetic oxytocin augmentation (n=1097) achieved a spontaneous vaginal birth compared with 76% of women not exposed (n=2745). Augmented women were more likely to experience forceps birth (RR 2.41, 95% CI 1.93-2.01), vacuum extraction (RR 1.89, 95% CI 1.62-2.21) and caesarean section (RR 2.18, 95% CI 1.74-2.67), as well having as a threefold increased incidence of intrapartum pyrexia and a doubling in the rate of postpartum haemorrhage > 1000mL (Bugg et al., 2006). Similarly, a retrospective cohort study which aimed to assess obstetric outcomes for 106 755 induced and augmented births in Scandinavia reported a significant increase in operative births (OR 4.0, 95% CI 3.7- 4.2) with synthetic oxytocin use during labour (Oscarsson, Amer-Wahlin, Rydhstrom & Kallen, 2006). Other studies report similar findings (Bernitz, et al., 2014; Svardby et al., 2007) although a systematic review (Wei et al., 2013) assessing early amniotomy and early oxytocin administration demonstrated a modest but non-significant reduction in caesarean section rates (RR 0.89; 95% CI 0.79 to 1.01; 14 trials; 8033 women). It is of course reasonable to also question the 'chicken and egg' of such findings; do women who receive augmentation have labour features that might predispose to these outcomes anyway, such as malposition which could contribute to the dystocia the augmentation intends to 'fix'?

Postpartum haemorrhage

The evidence for a link between intrapartum oxytocin use and postpartum haemorrhage (PPH) seems clear-cut. The postulated mechanism for this effect rests with the down-regulation of oxytocin receptors previously discussed, which may affect the production of endogenous oxytocin and lessen the effectiveness of exogenous oxytocin during prolonged labour (Grotegut, Paglia, Johnson, Thames & James, 2011). Belghiti et al., (2011) concluded that synthetic oxytocin during labour appeared to be independently associated with severe PPH (haemoglobin measures that correlated with >1000mL blood loss) following birth. This was especially the case for women who did not receive prophylactic oxytocin for placental birth (aOR: 1.8, 95% CI 1.3 to 2.6) but was also present in a dose-dependent manner for women who did receive prophylaxis. Kramer, Dahhou, Vallerand, Liston & Joseph (2011) and Kramer et al., (2013) agreed that labour induction and augmentation are major risk factors for PPH. These findings echo those of Sheiner, Sarid, Levy, Seidman and Hallak (2005) who reported an adjusted odds ratio of 1.4 for severe PPH following synthetic oxytocin use.

Waterstone, Bewley and Wolfe (2001) and Combs, Murphy and Laros (1991) both suggested ORs of 1.6 for PPH, though neither adjusted for possible confounders such as labour duration or other individual risk factors.

Breastfeeding

Disturbances to successful initiation of breastfeeding are described for women exposed to synthetic oxytocin during labour. Augmented women were three times less likely to breastfeed within the first four hours and twice as likely to have introduced artificial milk substitutes by discharge from hospital (Wiklund, Norman, Uvnas-Moberg, Ransjo-Arvidson & Andolf, 2009) when associations between augmentation, epidural use and breastfeeding in 351 case-controlled pairs of women were explored. A smaller pilot study showed a reduction in exclusive breastfeeding at three months of age in twenty mothers who were oxytocin-exposed during labour (Olza-Fernandez et al., 2012). Gomes, Trocado, Carlos-Alves, Arteiro & Pinheiro's (2018) retrospective cohort study comparing 101 oxytocin-exposed mothers with 100 non-exposed mothers found intrapartum oxytocin use to be a predictor of reduced first-hour breastfeeding (OR =2.493, 95% CI: 1.05–5.92; p=.038) and at three months more women (26.7% vs 14%, p=0.035) had ceased breastfeeding in the exposed group compared with the non-exposed group. Mother-baby dyads in this study were included only if the birth was spontaneous and the baby was at term gestation and well. Gabriel et al. (2015) videoed babies during postbirth skin-to-skin sessions and concluded when assessing the newborn's state of consciousness that total primitive neonatal reflexes were reduced in the oxytocin-exposed babies compared with non-exposed babies (p<0.02). Given the high association of labour augmentation with epidural use there is speculation about whether individual or combined effects of these interventions are where the association lies.

Maternal mental health

Postpartum emotional well-being for mothers has been scrutinised in relation to synthetic oxytocin use during labour. Gu, et al. (2016) reported that among 386 women who had intrapartum oxytocin there was a dose-dependent effect on maternal mental health at two months postpartum, with higher doses corresponding to increased depression, anxiety and somatisation symptoms. Women who had lower doses of oxytocin were more likely to be exclusively breastfeeding at this time than those who received higher doses. Similarly, Kroll-Desrosiers et al., (2016) found increases in the risk of diagnosed depressive or anxiety disorders during the first postpartum year in

both women with a pre-pregnancy diagnosis (RR 1.36; 95% CI 1.20–1.55) and those without a pre-pregnancy diagnosis (RR: 1.32; 95% CI 1.23-1.42) when women were exposed to synthetic oxytocin during the peripartum period. These findings should be interpreted with caution, as ‘peripartum exposure’ included not just use for induction or augmentation of labour, but also contraction stress testing and use for PPH prevention during a two-week peripartum time spectrum. Whilst the study was large (9684 exposed women compared with 37 048 controls) a number of limitations exist in relation to potential under-diagnosis of postpartum mood disorders, range of exposures to synthetic oxytocin and lack of access to data for a group of higher risk women, all of which may render the estimation of relative risks conservative. Along with these demonstrated effects on labouring and postpartum women, synthetic oxytocin has been implicated in a variety of short- and long-term outcomes for babies.

Effects on the neonate

Studies conflict about whether intrapartum oxytocin use has detrimental effects on neonatal well-being in terms of admission to NICU and Apgar scores < 7 at five minutes. Bugg et al., (2006) for example found no differences, however Oscarsson, et al., (2006) saw a significant association between synthetic oxytocin use and NICU admission OR 1.6, 95% CI 1.5-1.7) and five minute Apgar < 7 (OR 2.3, 95% CI 1.8-2.9).

Several studies have implicated the use of oxytocin as a potential contributor to an increased risk of neonatal encephalopathy (NE). Neonatal encephalopathy (NE) is a “clinically defined syndrome of disturbed neurological function within the first week of life in the term (≥ 37 weeks) infant, manifested by difficulty in initiating and maintaining respiration, depression of tone and reflexes, subnormal level of consciousness and often seizures” (Pfister & Soll, 2010, p.s2). The proposed mechanism for this effect is perhaps an indirect one: use of oxytocin has the potential to create tachysystole (more than five contractions in ten minutes) and hyperstimulation (tachysystole plus non-reassuring fetal heartrate) (RANZCOG, 2014) which diminishes the normal fetal compensatory response to the transient reduction in oxygenation *during* contractions by limiting the time available for re-oxygenation *between* contractions. Over time, this can lead to asphyxia, with NE being one possible sequelae of this circumstance. Supporting this concept are studies which have demonstrated an inverse relationship between the number of contractions and fetal pH levels (Bakker et al., 2007) and incomplete oxygen saturation recovery when contractions are closer than two minutes

apart (Johnson, van Oudgaarden, Montague & McNamara 1994; Simpson & James, 2008).

Jonsson, Agren, Norden-Lindeberg, Ohlin and Hanson's (2014) clinical audit of the records for 80 babies diagnosed with NE in Sweden concluded that 'injudicious use' of synthetic oxytocin – here meaning use when not indicated by labour progress or where hyperstimulation occurred – was implicated in one third of the NE cases who had clinical evidence of acidaemia (umbilical artery pH <7.0, base deficit \geq 12mmol/L). Cautious interpretation of these results is necessary, as this dataset included babies born from 34 weeks gestation who may be less resilient in labour due to their prematurity. Also in Sweden, a case review by Berglund et al., (2008) of 472 cases where claims were made by parents for financial compensation following a severe event involving asphyxia during birth that resulted in death or NE, 177 of these cases were examined for 'suboptimal care'. Among this group, synthetic oxytocin was used in 89 percent of cases. 'Incautious use' of oxytocin was found; with 71 percent (increasing the dose despite pathological CTG) and 50 percent (hyperstimulation) occurring among these 177 cases. Unindicated use of oxytocin (ie no uterine inertia identified) occurred in 49 cases – 19 of these resulted in hyperstimulation, and 44 women received ongoing oxytocin despite severely pathological CTGs. Although the use of synthetic oxytocin *per se* was not necessarily the cause of morbidity in these cases, it lends weight to the justification for adding it to the high alert medications list.

In the developing world, synthetic oxytocin has been strongly associated with adverse outcomes. Ellis, Manandhar, Manandhar & Costello (2000) in their unmatched case-control study of 131 babies with NE born after 37 weeks gestation, found that the most preventable cause of NE was induction of labour (9 percent with NE babies cf 5 percent in well babies), although prolonged labour was not significantly associated with use of synthetic oxytocin (OR 1.04 95% CI 0.60-1.8). Twenty-nine percent of the 41 babies born to induced women had NE. When intrapartum oxytocin use was coded separately for IOL and augmentation, IOL was more significantly associated (OR 9.09, 95% CI 3.32-24.83). Of note is that at this time, continuous cardiotocography was not widespread in the study setting (Nepal) and the findings from this small study should therefore be seen in this context.

Contrasting these findings, a more recent case-controlled study set in the United States (Hayes et al., 2013) examined the records for 237 babies with hypoxic ischaemic encephalopathy and concluded that induction of labour by any method did

not increase the odds of encephalopathy. They did however note that frequency of contractions was a highly significant risk factor for asphyxia (OR 2.39, 95% CI 1.67-3.41) when there were seven or more contractions in any given 15-minute period (tachysystole). Wayock et al., (2014), also in the US, found among their sample of 109 neonates born after 35 weeks gestation who were treated with hypothermia for NE that the use of synthetic oxytocin just reached significance ($p=0.05$) with more control babies (35 percent) than case babies (17 percent) being exposed to intrapartum oxytocin. They postulated that use of synthetic oxytocin may in fact be *neuroprotective*, as the babies who were NOT exposed to synthetic oxytocin were more likely to have an abnormal MRI or die than those who were exposed.

Evidence therefore suggests that while the use of synthetic oxytocin can be beneficial, when viewed *in toto* the potential harms may outweigh these benefits. These quantitative studies provide us with empirical data that encourages caution in synthetic oxytocin use. To help round out the picture, what does qualitative research have to offer in terms of the experiences of midwives, women and their partners who are caught up at the 'coal face' of synthetic oxytocin use?

Midwives' relationship with labour augmentation

Despite the widespread use of labour augmentation, scant research attention has been paid to the experience of midwives in this domain. What little research exists, suggests that for midwives the use of synthetic oxytocin for labour augmentation represents much more than just another intervention among the many they regularly perform in their work with women. Qualitative exploration of midwives' experiences suggest that augmentation of labour is a symbolic area where worlds collide, in the sense that their deeply held beliefs about the physiology of birth, women's ability, and their own pride in their midwifery work rub up against the beliefs of a biomedical model that does not appear to value such notions. Midwives see the support of physiological birthing as central to their role (Thompson, et al., 2016) and they feel "a sense of inner conflict" when they come under pressure from both midwifery and obstetric colleagues to be augmenting women's labours, sometimes unnecessarily (Ekelin, Svensson, Evehammar & Kvist, 2015). Dutch midwives in Van der Hulst et al.'s (2007) study of midwives' perception of women's involvement in decision-making described augmentation of labour as the intervention that women 'had the least say over' regarding labour interventions, noting that this provided a dilemma for midwives.

Labour augmentation has been described as a site of inter-professional conflict (Clark, Simpson, Knox, & Garite, 2009). Writing from their United States perspective, and being involved in

... assessing and improving obstetric practices in many hundreds of different institutions has led all the authors to 1 (*sic*) identical conclusion: the most common cause of discord between obstetrician and labor nurse is the tendency of a physician not at the patient's bedside to urge the use of oxytocin in a manner deemed unsafe by the bedside labor nurse (p. e3).

Clark et al., (2009) suggest that a labour nurse is always likely to be more correct about the effect of an oxytocin infusion on a woman's labour than an obstetrician who may not even be on-site, but who will insist on continuation or escalation of an infusion despite the reservations expressed by the labour nurse, and without assessing the woman or viewing the CTG recording.

This sentiment echoes that of a previous study (Blix-Lindstrom, Johanssen & Christensson, 2008) in which twenty Swedish midwives participated in focus groups to discuss their experiences of decision-making regarding labour augmentation. They felt that at times, obstetricians made a decision without seeing the woman, preferring instead to follow the labour process "solely via consultation on the partograph" and they felt pressured by this, saying things like "delivery is not allowed to take its time because there is always an obstetrician sitting and pointing at the action line" (p. 194). The midwives further expressed their dissatisfaction with other non-clinical issues that they perceived affected decision-making; the busy-ness of the ward which put pressure on midwives to gain good 'throughput' by accelerating women's labours, policies and guidelines which were inconsistent with current evidence, and even the women themselves, "reading on the internet" and having "all these ideas" (p. 194) about how they would like their labour to be run.

These midwives suggested that because they worked much more closely with women than their obstetric colleagues, they were better positioned to understand women's needs and were the experts in uncomplicated childbirth, giving them a strong desire to act "in accordance with their knowledge and expertise" (Blix-Lindstrom et al., 2008, p. 196). They found navigating and balancing the various constraints of the health system, other health professionals, women's desires and their own professionalism challenging. Nevertheless they suggested that feeling like they could make positive

contributions to women's decision-making increased their sense of power (by being trusted by the women) and job satisfaction.

Women's experience of labour augmentation

Women's experience of the intervention has received equally scant attention in the qualitative literature, where arguably the nuance of women's experience will be more accurately captured than in quantitative enquiry. An earlier study by Blix-Lindstrom, Christensen and Johansen (2004) explored the experience of 20 women who had recently given birth who had experienced labour augmentation. These women generally described that their satisfaction with decision-making regarding augmentation centred on the importance of support and guidance from their midwife, along with knowledge and clear expectations about the intervention itself. Kjaergaard et al., (2007) used a grounded theory approach to explore the experiences of ten Danish women who experienced non-progressive and augmented labour. They concluded that women achieved 'synthesis by reconciliation' over time, with their feelings becoming more positive overall about the birth experience as time progressed. These women described interwoven positive and negative feelings; their relationships with their caregiver and partners being the most positive aspects, with pain and its management, the 'losing and regaining of control' (described in Cartesian terms as a mind-body split) and non-participation in decision-making processes being among the more negative aspects.

Quantitative exploration of women's experience of augmentation has been more common. A case-referent study by Nystedt, Hogberg and Lundman (2005) asked 84 women to classify their experience of prolonged labour as either positive or negative. The mode of birth was not found to be associated with the overall perception of birth as positive or negative. Congruently with Kjaergaard et al. (2007), they found that the women's partners and midwives were the most positively-rated aspects of their experience, and that longer labour, augmentation and pain management were strongly associated with a negative perception. Sadler, Davison and McCowan (2001) found that women's perception of satisfaction with their labour experience overall was not adversely affected by active management (early amniotomy and augmentation). In their randomised controlled trial comparing active management with standard care, of 472 women who returned a postpartum postal questionnaire, 77 percent of women were 'highly satisfied', with adequate pain relief, one-to-one midwifery care and fewer than three vaginal examinations in labour being associated with a positive satisfaction

rating. However, augmentation of labour was significantly associated with decreased satisfaction (OR 1.54 95% CI 1.01-2.38, $p = 0.05$).

...and what of their partners?

Little research attention has been paid to fathers' (or other partners') experience of labour augmentation either. Ten fathers who were interviewed following non-progressive labours in Denmark reported feeling "relieved" when augmentation was established, as this enabled them to "re-establish control" and gave them an opportunity to actively assist with labour support again. They described having lost the ability to connect and communicate when women's pain became intense, and they valued the augmentation as "goal-oriented" toward an end to the protracted labour (Hasman, Kjaergaard & Esbenson, 2014, p. 71). They also reported feeling left out and intensely helpless during active labour. Of note is that the interviews in this study were conducted ten years prior to the publication of these findings, so it is possible that fathers might reveal a changed relationship with caregivers in the birth room in a more contemporary context.

Summary

Cutting a swathe through the literature, the culture of the 'high-tech' birthing environment appears to diminish women's ability to achieve normal birth and midwives' sense of congruence between their midwifery philosophies and their practice. Whilst positioned by medicine as a safe way to increase the chance of vaginal birth, labour augmentation is frequently used injudiciously in this birth environment, posing risk for women and babies and contributing to cognitive dissonance for midwives in their role as the guardians of normal birth. Extant literature has not explored the conjunction of these factors in the context of a well-embedded midwifery-led continuity-of-care model which ostensibly should be able to mitigate against some of these contextual drivers of high intervention rates. To reiterate, my research question is:

"How does the culture of the tertiary maternity setting influence the augmentation of spontaneous labour for well women giving birth for the first time?"

The overall aim of the study is to explore the cultural landscape of the tertiary birthing suite and in doing so to identify the generative mechanisms that influence the

likelihood of labour augmentation for well first-time mothers. Underpinning this aim, the study objectives include

- * To describe a current snapshot of practice and identify compliance with the Labour Dystocia Guideline in current use at the facility
- * to explore decision-making about labour augmentation from multiple perspectives
- * to observe how power, relationships, structures and the birthing environment influence decision-making for labour augmentation

Significance of the study

It is hoped that improved understanding of the conditions which encourage the over-use of labour augmentation procedures may generate the development of strategies to optimise the potential for supporting physiological birth to its normal conclusion in the tertiary maternity setting. In turn this could positively impact on both the psychological and physical outcomes for women giving birth for the first time, the well-being of their babies, and improve the sense of congruence between midwives' beliefs and application of these beliefs to their midwifery practice. Designing a study that could yield this understanding led to the selection of critical realist ethnography as a means toward this end. The following chapters outline the theoretical and methodological decisions I took to progress this aim.

Chapter Three- Methodology

Introduction

Having examined the cultural milieu that frequently exists in the hospital birth setting as a context for supporting women who are giving birth for the first time, we can see that a range of environmental influences are at play that threaten to disrupt her physiological process. Exploration of the literature confirms that there is a tendency to over-diagnose labour dystocia and to overuse augmentation procedures (Berglund et al., 2008; Bernitz et al., 2014; Petersen et al., 2010; Selin et al., 2009). The emphasis that the biomedical model places on the use of surveillance and technology to ensure women's labours follow an acceptable trajectory places the woman and her baby at increased risk of the adverse outcomes associated with medical intervention (Davis & Homer, 2016). Getting to the heart of how and why this continues to occur despite ample evidence of the negative implications of injudicious use of such intervention (Bugg et al., 2006) is the driving motivation for this study. By understanding what gives rise to this situation we may develop strategies to resist it, and to re-define what an enabling environment that works in the interests of women, and not 'the system', looks like. The next two chapters will describe in detail the design and theoretical underpinning of the study. This first methodology chapter discusses critical realism as the philosophical, theoretical and analytical positioning for the study, and goes on to explain why ethnographic data collection methods were the 'right fit' for the project.

Critical Realism

The theoretical perspective which has informed this research as both an underpinning ontology and a broad framework for the presentation of the data analysis is that of Critical Realism. Introduced by Roy Bhaskar in his seminal work *A Realist Theory of Science* (1975), theoretical elaboration has occurred since by both Bhaskar himself (1979, 1987, 2008) and several other philosophers (notably Archer 1996, Archer, Bhaskar, Collier, Lawson & Norrie, 1998; Danermark, Ekstrom, Jakobsen & Karlsson, 2002; Decouteau, 2016; Groff, 2004; Manicas, 2006; Reed, 2009; Rees & Gatenby, 2014; Sayer, 2000).

Ontology (what is 'real') and epistemology (how we come to know what is real) should ideally lead coherently into the design and implementation of any research endeavour (Tolich & Davidson, 2011). The roots of both exist along a continuum, with the margins of this continuum being, at one end positivism/realism, and at the other

interpretivism/relativism. Positivism contends that in order to know that something is 'real', it needs to be able to be measured (seen) and therefore 'known' by empirical enquiry – the truth is 'out there' to be discovered (Cluett & Bluff, 2006). It holds that this 'truth' can be known for all time, in all circumstances. Interpretivism (sometimes called social constructionism) contends that what is 'true' can only be known by examining the *meanings* that individuals attach to the phenomena, therefore what is 'real' is socially constructed, dependent on context, and only 'knowable' for that context at that time (Cruikshank, 2012; Danermark et al., 2002).

The knowledge claims resulting from both ontological positions have been criticised as being equally incapable of adequately explaining complex and nuanced natural and social phenomena. On the one hand, positivism argues for an event-dependent stance which "reduces the world to a series of discrete events that can only be identified through the sense experiences of individuals which is represented in the form of empirical regularities" (Reed, 2009, p. 433). Constructionist ontology contends that reality is the creation of social actors whose language and discourse determines what can be described and understood, but which has no 'objective' ontological status (Reed, 2009). Both positions are clearly not infallible in every circumstance.

Critical Realism presents an opportunity to bridge the apparent divide between the positivist and interpretivist approaches, without disrupting the ontological or epistemological assumptions of either. Bhaskar (1975, 1979) proposed that the ontology of Critical Realism is 'layered', with reality being discerned across three domains; the empirical, the actual and the real. He argued that things can be known, and therefore real, without being 'seen', because if the underpinning conditions of the system are changed, the *effects* of these changes are observable in the empirical domain. Thus, a basic premise of critical realism is that things can exist (be 'real') independently of our knowledge of them (Bhaskar, 1975). All entities have capacity to be realised, or not realised. A frequently used example is that of water. Water holds the capacity (or *causal tendency*, also known as a *generative mechanism*) to put out a fire, or to carve a glacial valley, irrespective of whether it does these things. The constituent parts of water, oxygen and hydrogen, are not in themselves capable of these things. Indeed, individually they have capacity to exacerbate rather than extinguish fire, but if the correct conditions exist, in combination this extinguishing tendency can become realised. This concept of 'correct conditions' has been called *conjunctural contingency* (Decoteau, 2016).

Examples from the social world include things such as racism and sexism (Haslanger, 2013). These things are not knowable as entities in themselves, but if the generative mechanisms that underpin the expression of racism or sexism are changed, then a difference can be observed empirically (Porter, 1993). Generative mechanisms in open social systems, while being embedded within a particular context and social structure, are none-the-less played out in the *actions* of people, so both structure and agency give rise to what we perceive as reality. This capacity of social actors - in our case women, families, midwives, doctors, and managers - to *choose* their actions, whether or not constrained by the conjunctural conditions of the generative mechanisms, lies at the heart of the emancipatory potential of critical realism.

While social constructionism allows for the 'breaking down' of the components of phenomena to aid our understanding, it does not lend itself to the 'building up' of solutions to the problems identified (Cowie, 2015). Constructionist ideas have been challenged as not being capable of offering explanations for *why* things are as they are and how things could be better (Willig, 1999). A critical realist position allows us to accept the interpretivist view that the available discourses about a phenomena construct our social realities, but also combines it with the understanding that there is an underlying reality of an external world, including the reality of personal experience, which exists independently of our representation of it (Nightingale & Cromby, 2002).

A simple exercise can shed light on an example of how an *available discourse* contributes to the development of a social reality. A woman in the western world, excited to discover she is pregnant for the first time, decides to surf the internet for some information about having a first baby. As a first port of call, she enters "having your first baby" into her search engine. On any given day, the titles of the first ten of 95.5 million resources supplied are akin to the following:

10 things you should know about babies – Scary Mommy

Stuff no-one told me about having a baby

37 things you should know before having your first child

New mom's survival guide

A guy's guide to having a baby

The best and worst things about having a baby

100 little things about pregnancy, birth and being a first-time mom

42 things that change when you have a baby

10 things I wish I had known before becoming a parent

50 things that happen in the first year of having a baby (Google search 12.04.18)

It is unsurprising that many women faced with this information will perceive that having a baby requires a *lot* of prior knowledge and will be a life-changing event that may even need to be “*survived*”. Searching for “giving birth for the first time” is even more potentially overwhelming:

6 labor tips that help you rock your first birth

15 things every first-time mom should know about giving birth

The stages of labour and birth in a first vaginal delivery*

7 mistakes first time moms make before and during labor

Giving birth: the first time AND the last

Birth surprises: 15 things moms didn't expect

How long will my labour last?*

First time mother terrified of giving birth: hints and tips

10 things that'll definitely happen the first time you give birth

How did you feel when you saw your baby for the first time?^ (Google search 12.04.18)

Just two titles* suggest they might actually have content that will be factually informative about giving birth, and although one title (^) hints that there could be something positive about having a baby, there remains an overall impression that birth is scary, requires prior knowledge and that unexpected things will happen. Of course, women are also informed by midwifery and medical caregivers, family members, social and other forms of media and an array of other sources. In many cultures tokophobia – fear of childbirth - is the subject of a growing literature and it is a rare woman who greets the prospect of giving birth for the first time without even a whiff of nervousness. Thus, apprehension about giving birth is a discourse that has become a social reality by virtue of its socially constructed narrative.

Midwives, doctors and family members similarly each have their own understandings about what giving birth for the first time means, and these beliefs shape their relational interactions with the birthing woman. These interactions occur, in this research, within the context of a tertiary hospital environment, which in turn has its own culture or way of being. Designing a project that would capture elements of this culture led to my choice of ethnographic data collection methods. These methods would enable me to surface some of the *generative mechanisms* that are operating below the surface in the tertiary environment when women are giving birth for the first time. Understanding how these mechanisms interact to shape this experience could lead to the

development of strategies for resistance that women and clinicians might employ in the quest for enhancing the protection of the safe space for birthing that women require.

The layered ontology of critical realism

An example of layered ontology from midwifery has relevance to bring us back to the current research focus. Walsh and Evans (2014) described how labour dystocia can be examined using the three domains described by Bhaskar. At the *empirical* level, the strength and frequency of contractions, and dilatation of the cervix can be assessed and therefore 'known' as measures of labour progress. At the *actual* level, what occurs to produce these observable effects can also be known. For example, they described how the action of maternal hormones on the woman's body, and the mechanics of foetal position contribute to what is observed empirically. Further, operating in the *real* domain, are the more nuanced effects of environment, companionship, the woman's disposition and so on – the so-called 'generative mechanisms'; "Thus...a series of generative and overlapping mechanisms operating at the real level...ultimately impact on uterine contractions at the empirical level" (Walsh & Evans, 2014, p. e2). If the generative mechanisms of the real level can be changed, then differences might be seen at the empirical level. For example, the presence of a known and trusted caregiver and a non-threatening environment for birth may influence the orchestration of labour hormones and ultimately increase the likelihood of physiological birth. The following diagram (Figure 1) captures the essence of these concepts:

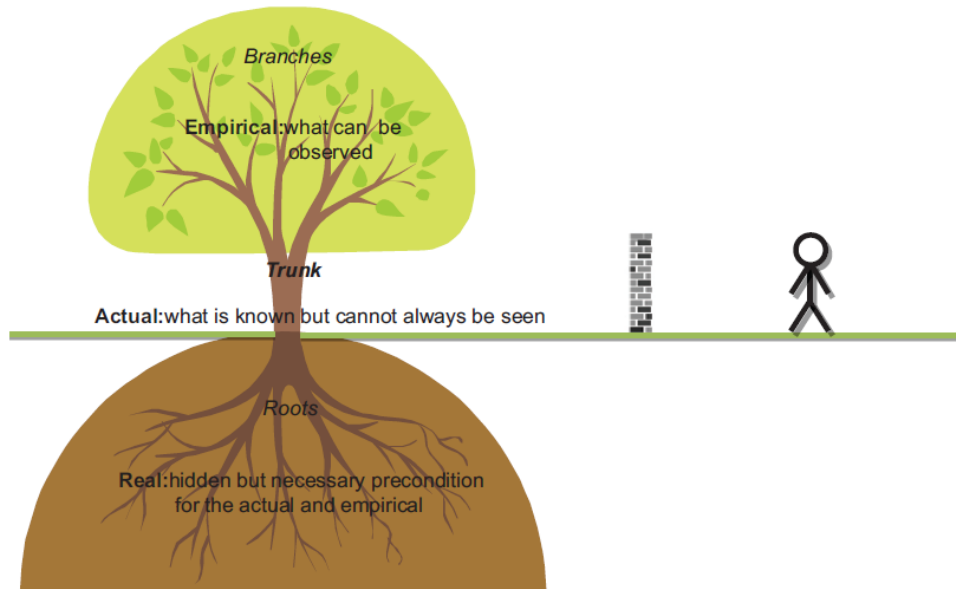


Fig. 1. Tree diagram of three ontological levels: empirical, actual, real. (Adapted from Dyson and Brown (2005).)

(Image credit: reproduced with permission from Walsh & Evans, 2014 – see Appendix A).

Figure 1. Critical realism layered structure

Thus it follows that epistemologically, critical realism lends itself to methodologies that are open to multiple methods of data collection and analysis. Critical realism accepts that positivist assumptions can be used alongside interpretivist ones to contribute breadth and depth to ‘coming to know’ a phenomenon Thomas, 1993). As an *individual* woman’s birth experience can be explored in this stratified way - paying attention to real, actual and empirical ways of knowing - the collective experience of women presenting to a tertiary maternity unit in labour, and the culture which surrounds and arguably determines this experience can similarly be considered across these three dimensions. Generative mechanisms at the real level might include such things as the beliefs of - and relationships between - health professionals, women and their families. Available social and professional discourses in relation to birth are likely to shape how care is provided and experienced. At the actual level the built environment might enable or constrain those within it. Administrative and operational requirements may influence what can happen and when. The hands-on provision of (and response to) care, and application of technology are the facts and events that may contribute to maternity outcomes in seen and unseen ways. Understanding how these strata interact might assist us to come closer to an understanding and explanation (Danermark, et al., 2002) of the empirical findings that are the subject of the problem statement for this enquiry.

Theories of causation

A critical realist perspective thus invites a range of data collection possibilities, and calls for methodological pluralism (Archer, Sharp, Jones & Woodiwiss, 1999). Theorists have promoted using the language of *intensive* and *extensive* research methods, rather than the more paradigmatic language of quantitative and qualitative enquiry (Danermark, Ekstrom, Jakobsen & Karlsson, 1997). Rather than a dichotomous 'either/or' suggested by quantitative and qualitative approaches, they argue that using methods that are relational and inclusive of both inductive and deductive approaches ('both/and') lends both breadth and depth to understanding. Recursive engagement across data sets within a project using abduction, abstraction, retroduction, and testing of theory (see Chapter Four) enables researchers to explore multiple perspectives via multiple methods and this aids their overall interpretation and integration of ideas (Decoteau, 2016). This study may enable identification of some generative mechanisms that may give rise to the permissive use of labour augmentation. The 'testing' aspect of the analytic process may thus be possible in future research endeavours, where application of this understanding of how the generative mechanisms combine could improve decision-making in the clinical context.

Underpinning the emancipatory potential of both critical realism and ethnography are theories about the causation of social processes and their outcomes. Critical realist ethnography accepts that there are contested views about what is real (Barron, 2013) and it provides possibilities for bringing about needed change because the reflexivity associated with it embraces the idea of multiple causalities, depending on the ways that the generative mechanisms combine in the given situation. This contrasts with other approaches, for example grounded theory, where the theory generated by analysing data approaches predictability - "if elsewhere approximately similar conditions obtain, then approximately similar consequences should occur" (Strauss & Corbin, 1994, p. 278). Decoteau (2016) argues that the grounded theory approach to causation, while being able to describe peoples' choices for action, does not provide an account of "the structural conditions within which these choices are made available" (p. 62). Critical realism contends that the world is far too complex to ever really know or explain, because the underlying structures have the potential to either change or be reproduced, and the agents acting within in them have individual choices about enacting the causal mechanisms or not. By examining these causal mechanisms, and attempting to explain how, when and why they may be expressed, opportunities exist to manifest change. Direct observation, as one component of data collection in this

research, provided the best opportunity to examine the real, as well as the actual and empirical levels within the study. An ethnographic approach to data collection enabled me to consider how elements of the generative mechanisms combine, and manifest as the culture within the institutional setting that so strongly shapes practice and outcomes.

Using ethnographic methods to 'case' the landscape

Ethnography has historically concerned itself with the study of human culture. It emerged from anthropology, and its earliest proponents produced rich and detailed descriptions of the behaviours, beliefs and social interactions of the small societies they studied (Naidoo, 2012). At first there was scant attention paid to the point of view of those observed, and ethnographic reports were largely *etic* (data derived from the researcher's interpretation) rather than *emic* (data derived from the participants themselves). In the early twentieth century Malinowski, as described by Lincoln and Denzin (2011), was credited with introducing the concept that rather than observing from 'outside', the researcher could more successfully understand and interpret the cultures of others by immersing themselves within the research space (participant observation), and this notion has prevailed since as a central tenet of ethnographic enquiry. As the method continued to develop throughout the twentieth century, the idea that groups being studied were being 're-presented' (by researcher interpretation) led to questions and criticisms about the ethics and morality of this; the very *purpose* of ethnography was under fire. Although it was accepted that ethnography added to the knowledge base about groups, some saw it as an "academic exercise that added little constructive value" (Atkinson & Hammersley, 1994).

Critical ethnography as an evolution of ethnographic enquiry has gained popularity since the 1970s, as a way to surface practical solutions to the problems identified within ethnographic studies. Ethnographers have developed their understanding that to simply *describe and interpret* the minutiae of the observed groups' experience without using the knowledge gained to *improve* the groups' experience is at best potentially patronising and at worst voyeuristic. A critical approach to ethnography, especially in the study of healthcare, offers additional strengths – by emphasising the potential emancipatory intent of the research encounter and by providing a framework that accepts that cultural impacts on practice are dynamic rather than fixed (Dove & Muir-Cochrane, 2014).

Thomas (1993) describes the core of critical ethnography as being “study of the process of domestication and social entrapment by which we are made content with our life conditions” (p. 7). He argues that domestication – working within one’s ‘intellectual leash’- gives us the opportunity to absolve ourselves of individual responsibility so that the solutions to problems become the domain of experts or governments, rather than of individuals, giving the example of how crime becomes the responsibility of the police, rather than any individual perpetrator. Thomas suggests that what commonly occurs in the research world is that researchers study ‘things’ in isolation from their underlying processes, and we therefore “fail to explore the ironic or emancipatory potential of [our] research” (p.7). By stepping back from what is observed and engaging in a process of deep reflection about the underlying mechanisms that give rise to the perceived reality, critical ethnography presents the opportunity to proffer new ways of acting that reduce the oppression of the observed group/individual. Developing strategies for resistance therefore becomes possible. There are mechanisms operating within health systems which arguably can inhibit an individual clinician’s ability to think for themselves (guidelines, checklists, assessment stickers, protocols). Similarly, health consumers may be constrained from fully engaging in informed decision-making by administrative constraints associated with access to procedures. Because critical thinking challenges ‘taken-for-granted’ ideas, it enables us to step from “what is” to “what could be” (Madison, 2005, p.1) by exploration of the hidden agendas and cultural nuances that operate in social situations to oppress particular groups or inhibit the achievement of a person’s fullest potential in that situation. By identifying these underlying mechanisms, ethnographic methods present a perfect ‘fit’ for such endeavour.

One key question that critical ethnographers grapple with is to uncover whose interests are being served by continuation of the status quo. Data sources can include people as individuals or groups, documents, or “any other artefact that embodies cultural meaning” (Thomas, 1993, p. 38). Critical ethnography gives a researcher the freedom to begin with a broad topic, and to shape enquiry around what there is to be found – decisions made about the structure of the enquiry may therefore be ad hoc, as multiple emergent research questions may arise as the study progresses. Critical ethnography enables diverse data collection methods to be used, depending on what is needed to be known in order to get to the bottom of the sources of oppression or dysfunction within a system. According to Parrisopoulis (2014), critical ethnography in the health field has the potential to “unmask a web of contextual factors that stem from subjectivity, bringing to full visibility the art and science” of clinical practice (p. 297).

Madison (2005) sees critical ethnography as the “doing” of critical theory - critical theory “in action” (p. 9). She contends that positionality within research enquiry is key, because it forces researchers to consider their own privilege, biases and power at the same time they are “denouncing the power structures that surround [their] subjects (p. 1). She further describes this as “inviting an ethics of accountability by taking the chance of being proven wrong” (p. 8). By this she means that the researcher cannot help but bring their own perspective to the work, by selection or non-selection of data to include, and decisions made about who to talk to. My own reflexivity in relation to this study is discussed in the next chapter.

Being ‘open to being proven wrong’ allows the possibility that whatever pre-conceptions might be held, and accounted for, by the researcher are open to challenge. Minimisation of bias is an important consideration, and Vandenberg & Hall (2011) give clear guidance about the use of reflexivity, relationality and reciprocity as strategies for doing so. They argue that multiple sources of data (described by Allen, Chapman, Francis & O’Connor, 2008, as an important aspect to demonstrating credibility and trustworthiness) do not necessarily prevent bias because the researcher decides which data units to privilege and which to jettison. Vandenberg and Hall (2011) suggest that involving participants at the early stages of planning and development assists researchers to identify their own assumptions, and reduces the likelihood that the researcher unintentionally gives credence to dominant structures because they have not sufficiently questioned their own views and research processes (p.26). Power-sharing with participants (relationality) by involving them in decision-making about ongoing design considerations, for example by asking them about topics not covered that they consider should be, can also minimise researcher bias. As discussed more fully in the next section, I used my initial interviews with midwives and women to canvass the possibilities for capturing the discussions between doctors and women regarding their augmentation decisions.

Movement towards a critical realist ethnography

Having examined the ontological and epistemological underpinnings of both critical realism and critical ethnography, and convinced of the mutually accommodating ethos of each, it seemed likely that theoretical movement towards a critical realist ethnographic methodology has been undertaken. This led to my discovery of the writings of Ian Barron (2013), Rees and Gatenby (2014) and Laurie Decoteau (2016)

who have further theorised the mutually beneficial relationship between critical realism and ethnography. Decoteau (2016) in particular, argues that critical realism contributes to understanding causal explanations in ethnographic research in the following ways: “1) by linking structure to agency; 2) by accounting for the contingent, conjunctural nature of causality; and 3) by using surprising empirical findings to generate new theory” (Decoteau, 2016, p. 58).

The use of ethnographic data collection tools thus enabled me to surface both an empirical appreciation of the labour augmentation landscape in the tertiary environment as well as triangulating data derived from semi-structured interviews with women, and interviews and focus groups with midwives and doctors involved in the decisions to augment labour. Observation of the clinical environment yielded important insights into how the cultural milieu of this birth setting contributes to a permissive use of this intervention. The project design took shape over many months, with many possibilities being explored and discarded. The following diagram (Figure 2) describes the overall design concept of the project:

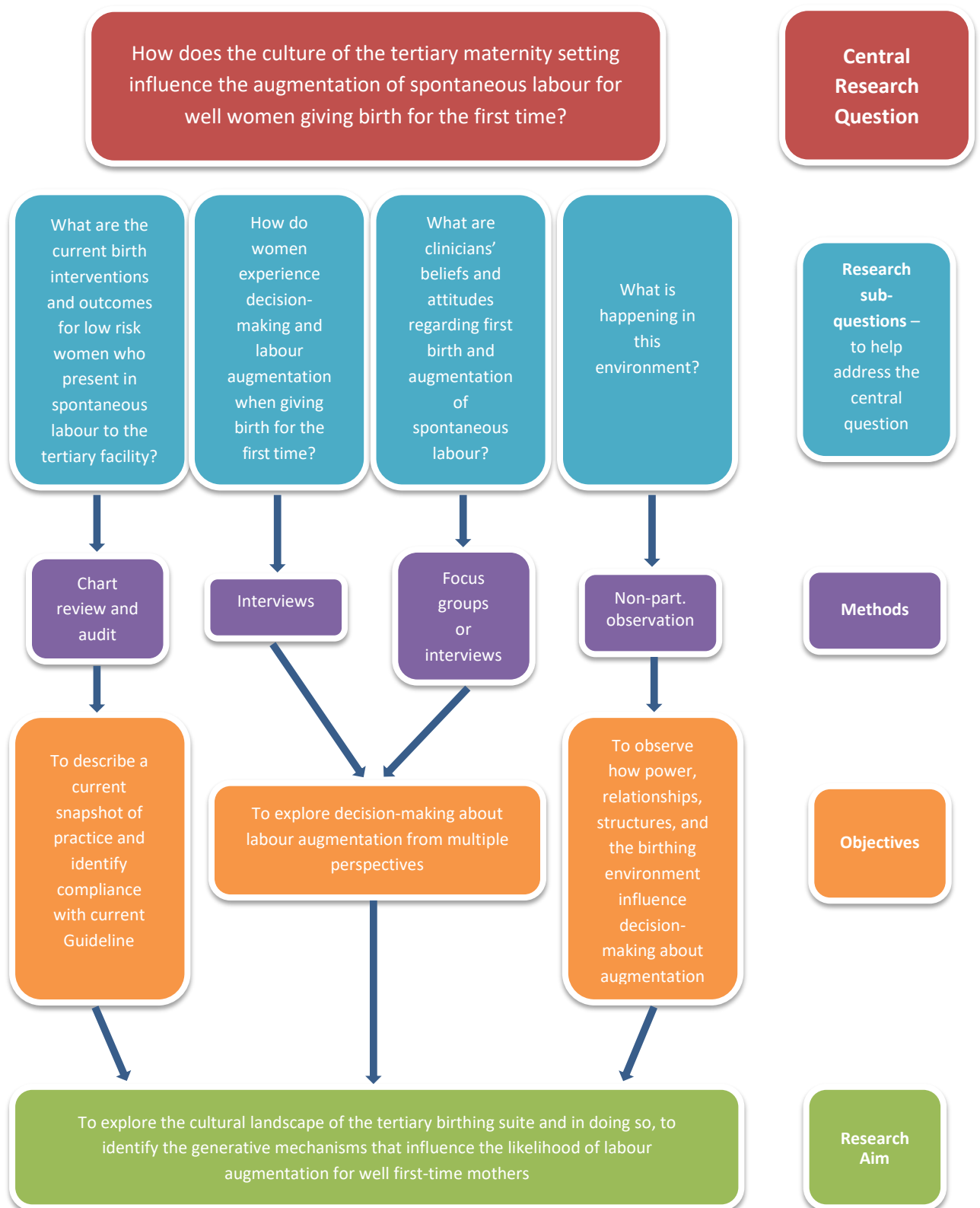


Figure 2: Conceptual framework for the study design

Selection of data collection methods

The following section describes the selection of the data collection methods used in this study. Their selection was predicated on determining how the research aim and objectives of the study could best be met. An in-depth description of recruitment methods and implementation of each component of the research will be discussed in the following methods chapter, but here I briefly canvass the rationales for selection of each method and why I believe they were a good fit for the project.

A retrospective chart review incorporating audit was chosen as the first step in the process of understanding the landscape of care provision at the tertiary hospital in relation to augmentation procedures. Clinical audit can be used to provide a snapshot of current practice and is useful for scoping out the magnitude of a clinical problem because it assesses whether what *ought* to be happening, is *actually* happening in relation to a practice Policy or Guideline (Godwin, 2001). The chart review provided context for the ongoing components of the research and addressed the first study objective by describing a snapshot of current practice and assessing compliance with the Labour Dystocia Guideline.

In order to understand women's decision-making experiences in relation to the management of slow labour (addressing the study's second objective), I conducted individual semi-structured interviews. Interviews enable researchers to "perceive and understand the phenomenon that is being studied from the perspective of the participants" (Bluff, 2006). Semi-structured interviews allow researchers to cover key points they wish to understand more fully, but also give space for the participant to discuss aspects of their experience the researcher may not have directly asked about (Creswell, 2014). In this way, the insights gleaned and knowledge generated as an outcome of the interview can be viewed as a mutual construction between the researcher and the participant (Bluff, 2006) and can also be used *developmentally* (Denscombe, 2014). This means that future interviews with other participants may be influenced by the insights of previous interviews as new lines of enquiry are added. I not only wanted to explore how women decided about accepting the labour augmentation procedure but also what measures successfully support women to continue through long labours without using augmentation procedures. This information could lead directly to practice recommendations for clinicians and give guidance to family members about what constitutes helpful labour support and I was keen to explore each woman's *individual* experience of this. I elected to conduct face-to-face interviews because I was hopeful that the personal element of being present

would encourage the women to talk more openly about their experience than they might if the interview was conducted online which can create a sense of remoteness between the interviewer and participant (Denscombe, 2014).

Also addressing the second study objective, the perspectives of clinicians were canvassed by utilising a combination of individual interviews and focus groups. Offering clinicians options for discussing their views was a pragmatic decision; this would mean that practitioners could decide for themselves whether a group situation, or a private conversation best enabled them to feel comfortable to participate. By acknowledging clinicians' very busy lives, I hoped that having the opportunity for a group conversation within their own practitioner role grouping (i.e. midwives, doctors) or the chance to speak with me privately would expand the likelihood of participation.

Focus groups can lend additional insights to data collection because the dynamic interactions that occur between group members can generate a sense of collective experience (shared understandings) while being alert to individual differences (Tolich & Davidson, 2011). They also reflect how beliefs and opinions are products of social interaction, the same as in the outside world, so can demonstrate reliability and transferability as aspects of study rigour (Denscombe, 2014). Focus groups can hold an advantage over individual interviews because there is the potential for the discussion to reach consensus or dissensus on some issues – thus giving the researcher an insight into a range of opinions and an opportunity to consider the underlying rationales for people's positions (Denscombe, 2014).

The observational component of the study required the most careful planning and consideration was given to whether it was possible to fully comprehend the cultural milieu of Birthing Suite without needing to be immersed within it. While questions remain about the *necessity* for direct observation as one aspect of ethnographic fieldwork (A. Lawless, personal communication, 2016) it seems contrary to the ethos of ethnography that a researcher could obtain sufficient data by a combination of document analysis, interviews, and focus groups to reach a reliable interpretation of events within the culture being studied. Understanding 'what is going on here' may only be partially known by paying close attention to the data derived from these methods alone. But in relation to women in labour, the ethics of direct observation are fraught, for many reasons. Disturbances to the woman's birthing environment can result in disruption to the orchestration of labour hormones necessary for physiological birthing, indeed, being *under surveillance* itself creates a less than optimal environment (Odent, 2011). For the clinicians involved, knowledge of being observed is likely to alter their

behaviour, creating 'artificial' data capture (McCambridge, Witton & Ebourne, 2014). I venture that this in itself could benefit women if it resulted in clinicians making a more concerted effort to engage in a truly informed decision-making process. This could therefore be highly ethical and be seen as creating positive change as a 'side effect' of the research process.

Whilst potentially difficult, this has however not proven impossible, and at least two midwifery ethnographies have reported successful negotiation of access to the intrapartum 'field'. One such study involved video-ethnography of the effect of birthing room design on labouring women (Harte, Leap, Fenwick, Homer and Foureur, 2014) and the other on the influences on women when choosing epidural in labour (Newnham, Pincombe & McKellar 2013). For this research which aimed to examine (among other things) the decision-making processes of women and clinicians around labour augmentation, a number of options were considered for capturing the 'real time' conversations that occurred as part of this decision-making.

Audio recording and video of the labour, with subsequent analysis of the sections where discussions about augmentation occurred were both considered for this project, but the practicalities of consenting an unpredictable array of people who might be involved in the woman's labour, including her support people, posed ethical hurdles which seemed insurmountable. Also, knowing about the potential impact on the orchestration of labour hormones that being under surveillance can entail due to excessive neocortical stimulation, I was eager to avoid creating more disturbance to any woman's birthing environment. A less invasive process that simply involved a brief presence in the labour room during an obstetric consultation about augmentation to observe the interaction between the woman and clinicians was ethically more reasonable and resulted in less disturbance for the woman, as she was already 'disturbed' by the presence of the obstetrician.

To this end I included in my first few interviews with women a question about how they would have felt about being asked during their labours whether a researcher could be present in the room during the consultations they had had when they were deciding about their augmentation. It seemed to me that it would be ethically sound to 'scope out' this possibility with women who had already given birth. I was surprised when the women consistently told me that had they been presented with this option during *pregnancy*, they would not have consented to having another person present during this consultation, but that if they were asked during labour they would have been very

happy to consider the request as long as they had the option to decline it. Each woman agreed that she would have said yes to having the consultation observed. Although this example of the 'ethics of accountability' (being open to be proven wrong) made me reassess my assumptions about what women would and would not find agreeable, this discovery buoyed me and gave me confidence to design an observational component to the overall project that included spending time in the delivery suite and also creating opportunities to observe the 'augmentation conversation'. Involving women in this dialogue during the planning stages, as Vandenberg and Hall (2011) described, certainly enabled me to demonstrate my commitment to 'getting it right' for women as the research unfolded. As well as this, I employed ethics-as-process principles (Dewing, 2008) throughout the observational components of the project, continuing to seek consent along the way, by checking in with both clinicians and women about my presence in their space.

I also asked the midwives I interviewed about how they would feel about being observed in this way, and again, was buoyed by their responses. They indicated that they are often being observed by student midwives and doctors as they go about their work, and that if they found themselves uncomfortable with the idea of being watched, as reflective practitioners they should be asking themselves why that might be uncomfortable for them. Alvesson and Skoldberg (2017) describe how researchers and the researched inevitably affect each other continuously and mutually during observational research, and Hugill (2015) argues that this is bi-directional flow of interpersonal interaction, which he terms "respondent reactivity", can effectively negate the Hawthorne effect by acknowledging the mutuality of engagement. The observational component as the final data gathering mechanism for this study addressed the last sub-question in the overall design by enabling me to witness first-hand what was happening in the tertiary unit and how the culture of the unit manifested itself.

Summary

This chapter has presented the theoretical and methodological foundations that underpin this study. The layered ontology of critical realism lends itself to a multitude of possibilities for uncovering the mechanisms which operate within the open system of the tertiary hospital. Using an ethnographic family of methods proved a good fit for investigating these processes because it enabled viewing the situation of labour augmentation from a variety of perspectives.

The following chapter outlines the specific processes undertaken for recruitment, implementation and ethical review of each component of the study beginning with a full description of the initial chart review and audit which I undertook to determine the scope of the clinical problem and provide a snapshot of current practice and outcomes at the study site.

Chapter Four- Methods

Introduction

Chapter three has outlined the theoretical and methodological basis for this research and described the selection of data collection methods deemed a good fit for addressing the aim and objectives of the study. Critical realist ethnography champions the use of multiple lenses across the phenomenon of interest, in order to lend both breadth and depth to understanding what is going on and to enable a more nuanced appreciation of the generative mechanisms at work shaping practice and outcomes. This chapter segues to describing in detail the processes undertaken to conduct the research. Beginning with the chart review and audit and progressing through the interviews with women, interviews and focus groups with clinicians and finally the period of non-participant observation in the hospital, this chapter traces the ethical review and implementation of each aspect of the data collection. A description of my data analysis processes follows along with a statement about my positionality within this research which includes reflection about some of the joys and challenges I experienced along the way. The chapter concludes with discussion of some ethical considerations not previously addressed and outlines my processes for ensuring study rigour.

The chart review and audit

The purpose of the quantitative component of the study was to understand from an empirical perspective what the current situation at this hospital was with respect to the augmentation of women experiencing their first birth there. As well as being interested in how often augmentation occurs and the outcomes associated with it, I was keen to understand whether augmentation procedures were being used in accordance with the clinical guidance available to midwives and doctors at the study site at the time. The Labour Dystocia Guideline outlines the expected actions of clinicians in relation to consultation with medical personnel, documentation, and the management of dystocia when either suspected or diagnosed. An audit element within the retrospective chart review made it possible to assess whether actual practice was aligned with expected practice.

Godwin (2001) outlines a 14-step process which was the basis of the design for my audit of the Labour Dystocia Guideline – Primipara. These steps are:

Step 1: Choose a topic

- Step 2: Choose a criterion standard
- Step 3: Write out your main audit question and secondary questions
- Step 4: Decide which data you want to collect from the charts
- Step 5: Design your data collection form
- Step 6: Decide how many charts you will audit
- Step 7: Decide how you will choose the charts
- Step 8: Pull the charts and collect the data using the abstraction sheet
- Step 9: Enter the data into a computer
- Step 10: Answer your audit questions
- Step 11: Present results and share them with colleagues
- Step 12: Decide what changes you should make based on the results
- Step 13: Implement the changes
- Step 14: Re-audit after time has elapsed (Godwin, 2001, p 2331).

The audit I undertook followed the first 11 steps of this guide and resulted in recommendations which have the potential, if followed, to reduce the number of inappropriate augmentations of labour. As the intention of this audit was to provide a simple snapshot of current practice, Steps 12 to 14 were outside the scope of this project. Although ethical approval is not typically required for audits of this type because of the retrospective nature of the data collection, approval from the Victoria University of Wellington Human Ethics Committee was gained to ensure overall rigour for the project (Approval #24875, 26.06.17, Appendix C2). It is certainly the case that there are ethical dimensions to consider with audit, for example paying attention to robust methods of sample selection and consideration of the impact that findings might have on particular clinicians, the recipients of care or the whole organisation (Hughes, 2005).

Audit Question:

To what extent does the practice of midwifery and medical staff comply with the hospital's Guideline for Management of Labour Dystocia - Primipara?

Audit Aims:

To determine compliance with the Guideline for Management of Labour Dystocia – Primipara

To assess the degree to which documentation requirements are met.

Data Tool

A data collection tool (Appendix B) was developed under the supervision of the academic supervisors. It was designed to capture data that would enable compliance with the Guideline to be assessed, as well as collecting general outcome data of interest to the broader objectives of this project.

Sample size

A web-based calculator was used to calculate the sample size (Raosoft®, n.d.). The number of charts I needed to review to have 95% confidence and +/- 5% accuracy from the population of low risk first time mothers presenting in spontaneous labour who planned birth in the tertiary unit was estimated to be 234 (2016 births n=806 for the inclusion criteria). The audit data was collected between June and September 2017, from clinical records for women who gave birth during the 2016 calendar year who met the inclusion criteria.

Randomisation and chart selection

Using the facility's Perinatal Information Management System (PIMS), the Health Service data manager provided an Excel spreadsheet containing 806 records for women who met the inclusion criteria:

- a) the birth was planned for the Birthing Suite at the tertiary hospital, and
- b) the woman was low risk – meaning she had not been referred during pregnancy to see a specialist obstetrician for a condition listed in the Referral Guidelines
- c) the woman presented to the tertiary facility in spontaneous labour or following spontaneous rupture of membranes
- d) the woman's gestation was between 37+0 and 42+0 weeks
- e) the woman was giving birth to her first baby

A table of random numbers was generated (<http://stattrek.com/statistics/random-number-generator.aspx>), and the corresponding line (woman) from the Excel spreadsheet column ID number was selected for inclusion. These clinical records were ordered from Medical Records in groups of 25 charts for data extraction. Thirty-eight (38) records were excluded because the women did not meet the inclusion criteria:

20 women had planned to give birth elsewhere (i.e. home or local primary units)

9 women had a planned induction of labour (IOL)

9 women were not low risk (e.g. had pre-eclampsia or gestational diabetes etc)

Where a record was excluded, the next number on the random number chart was included until a total of 239 records were reviewed.

Some details in the spreadsheet supplied by the Data Manager were pre-populated: age, ethnicity, admission to birthing suite date and time, labour established time, time of birth, episiotomy, blood loss, mode of birth, Apgar score at one, five and ten minutes (where known), birthweight, sex of baby. During data input to this spreadsheet of the data collected manually on the Data Tool, each pre-populated data unit was rechecked for accuracy, with several incidences of further data cleaning occurring at this point. The findings of the audit and selected outcomes are included within Chapter Six.

Interviews with women.

Ethical approval (17/NTA/75, 12.05.17, Appendix C4) was granted for conducting interviews with women who had experienced labour augmentation, and women who had experienced long labour but who had elected not to accept augmentation, as the insights of these women about what enabled them to complete their labours without resort to augmentation might prove valuable. Initial recruitment was by provision of information to eligible women either during their stay in the postnatal ward, or at discharge from birthing suite for those who went home directly following their birth (see Appendix D1). To be eligible, women needed to have planned to give birth to their first baby at the tertiary hospital, have spontaneous onset of labour at term, and have experienced a long labour.

I also presented the study at a local New Zealand College of Midwives meeting, to alert Lead Maternity Care midwives and others that I was seeking participants. This strategy proved quite unsuccessful, with just three women contacting me for further information and consenting to an interview. Ethics approval was gained for an amendment to the recruitment strategy (17/NTA/75, 11.12.17, Appendix C5), to insert an A5 flyer into the front of the Tamariki Ora Well Child Book which is provided to every woman on discharge from the hospital, and to place a poster (Appendix D9) on noticeboards at local medical centres and Well Child Provider facilities (e.g. Plunket rooms). I visited thirty medical centres and Well Child Provider clinics to request poster placement on their noticeboards. Most agreed to discuss this at their next Practice Meeting and intimated that they would likely be agreeable. One further woman responded to this invitation.

Once the observation period in Delivery Suite was underway it became possible to speak with midwives directly 'on the spot' when they were there with women undergoing augmentation. This resulted in more information packs being given to eligible women. Eventually, I conducted semi-structured interviews with nine women. Four had experienced labour augmentation, and five had experienced long labours but had not received an augmentation procedure. Four additional women had contacted me about participating in the study but did not meet the eligibility criteria.

The question guide for the interviews with the women is presented as Appendix F1. Interviewing the women was very straightforward. Brief demographic data to enable a description of this sample was collected, including the woman's age, ethnicity, LMC type and current age of their baby. All the women elected to be interviewed in their own homes. Apart from Maria whose sister arrived just as I was concluding our conversation, all were alone at home with their babies when the interviews took place. An invitation was extended to have a support person there if they preferred, or to meet somewhere more neutral. I felt it indicated a high level of trust, to invite me as a stranger into their home. But, pragmatically, it likely also reflected that it was easier for me to come to them, than for them to come with their new babies to a different place. Also, they would have been used to a midwife visiting them at their homes, as this is how postnatal midwifery care is typically provided once hospital discharge has occurred. Written informed consent was obtained prior to the interview following an explanation of the study and opportunity to ask questions.

Following each interview, the recording was transcribed by me, and the transcript returned to the woman for member-checking. Apart from correction of some typographical errors, and clarification from one participant that she hadn't in fact vomited during the night which I had clearly misheard on the recording, no further amendments were made to the transcripts prior to their inclusion in the data analysis. The analysis process is described later in this chapter.

Interviews and focus groups with clinicians

Ethical approval for conducting interviews and focus groups with clinicians involved in working with women giving birth was secured from the Victoria University of Wellington Human Ethics Committee (#24777, 09.08.17, Appendix C3). Participant Information Sheets (Appendix D2) and sample Consent Forms (Appendix E2) were distributed in Birthing Suite. Information about the study was presented in a New Zealand College of Midwives regional newsletter, as well as in person at a local monthly meeting. I also

spoke to midwives informally on a number of occasions and displayed posters in the study site's Birthing Suite office seeking participants. Three midwives who all worked within the hospital as core midwives contacted me over the next few weeks and agreed to an interview. One interview took place at the midwife's home, one at the university and one at a community location prior to attending a professional meeting. The interview question schedule for clinicians is presented in Appendix F2. Demographic data collected from clinicians was brief and included gender, ethnicity, professional role, length of time spent working with labouring women and length of time in practice at the study site. Written informed consent was obtained prior to the interview following explanation about the study and an opportunity to ask questions.

An LMC midwife sought an interview, but due to her work commitments three months went by with us being unable to arrange a mutually suitable time. Eventually, I offered to run a focus group for this midwife along with four other midwives in her practice, which was duly arranged and completed.

Being present in Birthing Suite provided further opportunity to engage with clinicians and remind them about opportunities for participation. One doctor contacted me following the presentation of the audit findings to the interdisciplinary meeting, so an interview was arranged and took place shortly afterwards at their professional practice rooms. Another doctor opportunistically agreed to a brief interview at the end of a shift. This interview took place in the Birthing Suite registrar's room. These two interviews used the same question schedule as for the midwife interviews and focus groups (Appendix F2) and the same demographic information was collected.

Ongoing difficulty with recruiting doctors for interviews led me to opportunistically offer to run a focus group with the doctors during their regular weekly teaching session. I spoke with a further eight doctors on this occasion, also on-site at the hospital. Unfortunately, only thirty minutes was made available for this and so I focussed on asking just these four questions;

How do you know a woman's labour is progressing?

How have you learned about normal progress for first birth?

What do you think about women's expectations for first labour?

How does the tertiary setting influence the experience of low risk first time mothers?

Further prompting during their conversation included some discussion about labour augmentation. There were some interruptions as people come in towards the end of

this recorded conversation. Although those present at the start had signed consent forms and confidentiality agreements, people who entered the room towards the conclusion of the conversation did not, and although they remained present in the room, they did not participate in the conversation. I felt embarrassed that this session had not been set up as rigorously as I anticipated – I usually placed a sign on the door saying that a recorded interview was in progress but had neglected to do so on this occasion. Because I felt the ground rules of usual research process had been breached, I later offered to withdraw the transcript of the doctor’s conversation from my data analysis, but this was deemed unnecessary by the doctor I organised the session with.

Having completed six interviews and one focus group prior to gaining access to Birthing Suite for the observation period and doing some preliminary analysis on the transcripts following member-checking, I was alert to some of the issues that had been raised by the interviewees. The identification of some “sensitising concepts” (van Helmond et al., 2015) from the transcripts proved very useful, and although I remained conscious of bringing an open mind, eyes and ears to my observations, the background glimpses afforded by the women and clinicians I had already spoken with provided some stepping stones for me as I entered the space. This “pre-fieldwork priming” (Madden, 2010) is useful for educating researchers to be alert to particular themes that may prove relevant or to which attention could be paid.

Observation in Birthing Suite – gaining access

A period of direct observation in delivery suite was the last data collection point for the project, although some interviews occurred during or after this period of observation. Typically, observation ‘in the field’ involves a prolonged engagement within the setting, sometimes over several months or years, in order to fully appreciate the culture of those observed in all its nuance (van Maanen, 2011). This level of engagement was neither practicable nor desirable for this project. As an acute setting for health care delivery, with rapid ‘throughput’ of labouring women and a relatively stable staffing situation, an observation period of five weeks allowed an adequate opportunity to explore the environment and the culture operating within it. Brimdyr et al., (2016) suggests that periods of fieldwork within healthcare settings are often less ‘immersive’ and can focus on specific parts of peoples’ days or more contained worksite areas, without compromising the quality of depth of the observation. During the fieldwork period, I spent 300 hours (across 27 of 35 consecutive days) in the clinical area, covering all shifts and all days of the week. This afforded opportunities to observe both

frantically busy day (and night) shifts as well as quieter times when the clinical demand was lighter due to no elective caesarean sections and inductions of labour being performed. These hours included time spent on site writing daily reflections after a period of direct observation. Further hours were spent at home, journaling my thoughts and hunches – this filled up all the spaces between sleeping and travelling to the study site and back, so did indeed turn out to be very immersive! A previously planned two week holiday at the conclusion of this observation period was certainly welcome to re-acquaint myself with my family, and give me time and space to think deeply about what had unfolded before me over the previous few weeks.

The ethical approval process for this aspect of the study proved less arduous than anticipated, having laid the groundwork diligently over the previous year. In the twelve months leading up to the proposed observation period I attended several meetings, education sessions, and presentations in order to ensure I had the support of the clinical and administrative managers and the staff. As a midwife I felt strongly ethically bound to be able to assist in the event of an emergency, even though I was clear that I would not be providing any clinical care to women in any other circumstance. Health professionals have a moral obligation to act if a clinical need arises (Hunt & Symonds, 1995) for example to prevent an unsafe act from occurring, and I took into consideration my professional standards and code of conduct, recognising the importance of prioritising the needs of participants over the research agenda. Gaining Special Staff Status meant I could act in my capacity as a midwife if required. The following table (Table 1) presents the steps I undertook in preparation for my period of observation in the Birthing Suite.

Table 1: Negotiating access to the Birthing Suite

Month	Activity	Who	Purpose
Jan 2017	Overall project	Clinical Director of Obstetrics	To introduce the study, and seek feedback on the proposal
Feb 2017	Overall project	Director of Midwifery	To introduce the study and seek feedback on the proposal
Feb 2017	Workshop	Whānau Care Services	To learn more about culturally appropriate conduct of the study
Apr 2017	Re chart review/audit	Data Manager and Operations Manager WHS	To discuss the practicalities of conducting chart review/audit, obtaining Special Staff Status, data access.
Apr 2017	Training workshop for data access	ITS service	To gain access to internal IT systems and become competent in their use.
Apr 2017	Birthing Suite visit	Charge Midwife Manager	To discuss accessing the site for completion of the chart review/audit, organising space to work etc
May 2017	Re chart review/audit	Data manager	To discuss requirements for the chart review re inclusion/exclusion criteria etc and preparation of spreadsheet
Jun to Sep 2017	Chart review/audit	Data collection period	In birthing suite – periodic opportunities to discuss project with midwives
June 2017	Women and Clinician interviews and observation	Operations Manager	To discuss the next phases of the study and provide an opportunity for feedback from Women's Health Service perspective
Jan 2018	Observation	Charge Midwife Manager and Midwifery Director	To discuss observation in birthing suite, seek their advice about how best to plan engagement with the staff
Feb 2018	Re chart review/audit	Clinical Director (Obstetrics)	To discuss audit findings prior to presentation of audit, and discuss observation period
Feb 2018	LMC Orientation day	Midwifery educators	To orientate to facility and some administrative operations at study site. Opportunity to meet with new LMCs and discuss project
Mar 2018	Audit presentation	Multidisciplinary meeting	To present audit findings, also raise awareness generally about the study
Mar 2018	Epidural Study Day Fetal Surveillance Workshop Emergency Skills Study day	Various midwifery educators within the hospital site	With a view to gaining further Special Staff Status Accreditation to enable me to be present on Birthing Suite. Further opportunities to discuss the project with midwives.

Mar 2018	Administrative requirements for access to birthing suite		Health clearance, Police Vetting Check, Children's Worker Safety Check, obtain Annual Practising Certificate for 2018/2019 year
April 2018	Observation	Charge Midwife Manager of Birthing Suite	To discuss observation start, daily access arrangements, supply documentation and posters for birthing rooms etc
April 2018	Observation	Made myself available for 2 x 6 hour sessions covering morning and afternoon shifts.	To allow all clinicians who work in the birthing suite to come and discuss the project, consent issues etc and answer any questions or concerns prior to my starting the following week.

Scholars who have conducted observational research in healthcare settings have written 'methods papers' that have outlined extremely time-consuming and difficult ethical approval processes where the observation of clinical practice encounters have been involved (see for example Harte, Homer, Sheehan, Leap & Foureur, 2017; Newnham, Pincombe & McKellar, 2013). The processes they describe include decision-making about the necessity to individually consent every person who may be involved in the clinical encounter, as well as others in the research field. For this aspect of the study, I initially completed a National Health and Disability Ethics Committee Scope of Review Form and submitted it for appraisal. This form is designed so that researchers can outline a precis of their research, and if it fits within the scope of the national ethics review process it will be recorded as such and a full ethics application is completed and submitted for approval. After submission of this Scope of Review form, I was contacted and advised that this observation in delivery suite could be assessed as a further amendment to the 'Interviews with Women' aspect of the study. I completed an amendment application, including samples of a poster for display in the Birthing Suite staff areas (Appendix D5), one for display in each birthing room within the Birthing Suite (Appendix D6), and 'observation-specific' participant information sheet (Appendix D7) and consent forms (Appendix E4). This amendment was approved within one month (17NTA75AM02, 14.03.2018, Appendix C6). The Research Advisory Group – Māori also endorsed each aspect of the study (Appendices C8 and C9).

Following ethical and further locality approval, I met with the Acting Birthing Suite Charge Midwife Manager to discuss best steps for beginning the period of observation. We agreed that I would arrange two periods of availability, each for six hours covering both morning and afternoon shifts, within the Birthing Suite area the week prior to beginning my observation. This gave all the midwives, doctors and others who work in

the area an opportunity to come and discuss the project with me and have any questions answered. It also provided a chance to talk about consent issues if staff were concerned about being observed. Information was also sent directly via email to all midwifery and medical staff which specifically outlined what actions they could take if they did not wish to be observed, and contact details for myself, my supervisors and the ethics committee should they wish to know anything further (Appendix D4). We agreed that I would contact the Midwifery Shift Coordinator on duty when I wished to come in to ensure the time was suitable.

Being there – practicalities of the observation period

During the observations, I mostly divided my time between two main areas within the Birthing Suite. The Office acts as a hub for the core midwifery staff and is where The Board containing details of all the women currently admitted is located. The second space is a workroom which is mostly used by LMC and core midwives for writing up their documentation and accessing computers for data input. It is also the room used for the medical handovers, during which time the room is vacated by others.

Observations were also undertaken in other areas in the Birthing Suite, including the birthing rooms, kitchen and 'whanau room' – a small room where family members can be if they are not in the birthing room with the woman they are supporting, for example during intimate examinations or when the woman wishes to have them leave.

Data collection during the observation phase of the study entailed taking jottings - brief notes - about encounters observed and conversations I engaged in during the hours spent in the Birthing Suite, followed by extensive reflective writing at the conclusion of each period of observation. Most days eight or nine hours were spent observing, and on two occasions an overnight shift of 13 hours was observed. I was present for 27 of 35 consecutive days between early April and mid-May 2018. Alongside my jottings and reflective writing I kept a detailed research journal which proved invaluable to developing my 'big picture' thinking along the way. Each day my jottings formed the basis of my more extensive reflections.

I decided not to write in my notebooks while I was present in the room I was observing in, as I quickly perceived that this made people uneasy. I would often find a quiet spot to capture the essence of each encounter while it was fresh in my mind. I was working on my laptop one morning during the first week of my observation, when the doctors came in for morning handover. A registrar said "are you going to sit there typing away

about everything I say?” (*from field notes*). I quickly reassured her that I would not be doing so but put the laptop away to confirm that was not my intention. She later told me that they had once been observed by an audit team of three people who sat with laptops furiously typing during an entire handover and that the doctors had all “hated” the experience. Having this knowledge meant that I could tailor my data gathering to be respectful of people’s sensibilities.

The first three of four days were awkward, as people got used to me being there. I imagined that on my first day, I would have an opportunity at both the midwifery and medical handovers to introduce myself and talk briefly about my research. This did not eventuate and I quickly realised that the daily roll-over of events did not allow for anything but the business of doing the handover. On the second day I had my first (and only) experience of hearing someone say “here she comes” and the room falling silent on my entry, which was disconcerting, but this was the only overt occasion of this kind of reaction. I adopted a routine of attending the two group handovers in the morning and afternoon if I was present during the day, and the 2300 and 0700 handovers if I was present overnight. Observing in a variety of places was a good strategy to ensure that the staff had periods during which they were not under observation which would assist them to feel more relaxed about the times I was present in the room with them. Within a few days I felt much more comfortable amongst the midwives, although the doctors remained fairly aloof with a few exceptions for the duration of my stay.

There was one amusing incident which I captured in my reflective journal. It occurred on day 5 during the night shift. I was writing about whether or not people were moderating their behaviour in my presence,

There were two situations tonight when core midwives used the phrase “get them out of here” about postnatal women in the birthing suite – then glanced in my direction – one said “oh, that’s a medical term for appropriately moving someone on” then laughed at her own joke, the other said “well, not ‘get her out’ but – well, look at the Board! (*reflective journal 13.04.18*).

After the first week I felt much more settled in and people around me seemed to notice me less, or at least just got on with their work and somehow seemed less ‘careful’ about their conversations. I began to discern two main ways that people engaged with me. There was a group of midwives who were keen to talk with me about the challenges they experienced within their working environment – I noticed that even if

their conversation seemed quite casual, there was a 'look' that accompanied some of their storytelling. This 'look' suggested something along the lines of 'I hope you are listening, because I am conveying something important here that you should know about'. The other transactions involved making sure I understood how well everyone got on, and how smoothly and efficiently the service ran, how 'present' and 'hands-on' the management were. This second group of storytellers tended to be in more senior roles within the organisation. I discerned a disconnect between what these people were telling me and what I was observing, and it made me appreciate the additional insight that observation lends to ethnographic enquiry as one crucial aspect of the 'family of methods' (Thomas, 1993).

In the third, fourth and final weeks of my stay, I felt much less visible as 'other', and people spoke more and more freely with me about their perceptions of their work environment. I often found myself in the workroom during times that midwives would catch their breath and eat their lunch, often quite late in the afternoon, and this was a great opportunity to chat about their workday and how things worked in an operational sense.

Preparing to leave

During the last few days of my observation period, I reminded staff I encountered that I would be leaving soon. Several midwives and doctors commented that they had become very accustomed to seeing me there, and that as I was now 'part of the furniture' they would miss seeing me. Three midwives told me in separate conversations that they felt my presence had really made people think hard about how to promote 'normality' and that they had been involved in many conversations with others about the 'silent effect' I was having on people's decision-making around ARM and synthetic oxytocin use. This may have been an unintended consequence, but it was affirming to realise that this was 'respondent reactivity' in action (Hugill, 2015).

Although these comments suggested that my presence was influencing people's behaviour, thus not achieving the 'invisibility' a traditional ethnographer might desire, I concluded that if practice change was occurring in favour of more considered use of interventions, ethically this was potentially an advantage to women (and more satisfying for midwives) and could therefore be seen in this light. As knowledge exchange, our conversations further contributed to a collaborative process of understanding this environment. The *knowledge* of those who inhabit this space was not 'theirs' to bestow nor 'mine' to extract – rather, by asking questions about their

experiences these workers were encouraged to tell me about things that they might not spontaneously have thought about telling me, and thus our understanding was generated together. I also reflected about how the potential my presence had to shape clinician's behaviour was a *living embodiment* of the 'actual' level of the theoretical structuring of the study – recognising my presence as an unseen event giving rise to practice change!

What worked and what didn't – coming clean as a researcher

While the chart review, interviews, focus groups and general observational aspects of the data collection in this study were fairly straightforward, as a novice researcher I under-estimated how challenging the direct observation of the medical consultation for the 'augmentation conversation' would be. Over the first two weeks on site, there were only three occasions where all the 'ducks lined up' in my quest to be invited to observe the consultation with the medical staff regarding the commencement of the oxytocin infusion. On the first occasion, after the woman had consented to my presence at the consultation, I accompanied the registrar and midwife into the room, introduced myself and positioned myself in a corner of the room to quietly observe. The registrar first told the woman she needed to do a vaginal examination. Because the consent form had reassured the participants that I would not remain present should this transpire, I elected to move, to stand behind the curtain just inside the door to the room. This way I hoped to hear the conversation but not observe the examination, which the woman was happy for me to do. But once the examination was completed, everyone forgot that I was there. I was unsure if the woman had been re-covered, so did not want to re-enter the room without invitation. Several awkward minutes elapsed, during which I heard only very muffled voices, until finally the student midwife came towards the door and saw me behind the curtain. She intimated that it was fine for me to go back around the other side of the curtain, and as I did, the registrar was just saying "...so the midwife will start the infusion once we have your epidural sorted out" (*from field notes*) whilst walking out the door. I had not *heard* any explanation about the augmentation but cannot be sure about what was said because the registrar was so quietly spoken.

On the second occasion, I ended up spending over ninety minutes in the room, because after consenting her, the midwife asked me to come in while the woman was being prepared for the epidural insertion. This clinical procedure proved problematic, with three anaesthetists taking five attempts to successfully site the epidural cannula. Although this provided some very useful (and disconcerting) insights for me about the nature of their interactions with her, I was unable to stay long enough for the actual

consultation about the augmentation, because of a prior commitment. However, this woman (Bobbie) told her midwife she would like to speak with me later about her experience, and she became one of my interview participants as a result of this interaction with her.

The third time a woman consented to my participation, the doctor did not come to get me prior to the conversation, despite telling me that he would, and knowing where I was. This reinforced a sense I had that this aspect of the data collection was, despite my initial enquiries about its acceptability to both women and clinicians, in reality proving quite difficult. I decided that whilst I would be happy to pursue further opportunities if they arose, I would also be accepting that this aspect of data collection seemed a step too far for some. No further opportunities arose for observation of the consultation so I had to accept that this aspect of data collection was unachievable. Midwives were certainly telling me about how these conversations unfolded once they were outside the woman's room, especially when they felt that information-sharing was sparse, or coercive, but they also told me that usually they themselves had done the 'informed choice conversation' prior to the doctors arrival, which seemed to be more about 'okaying' the intervention and writing the prescription for the infusion.

The collection of data from multiple sources inevitably led to a many decisions about how best to analyse and interpret the data. This was a less linear process than I imagined it would be, and I found myself tracking backwards and forwards through the data sets as patterns became evident in unexpected places as I went along. The following section outlines the processes I undertook to help me make sense of what I was uncovering.

Data Analysis

Chart review and audit

The data analysis for the chart review and audit was straightforward and occurred in isolation from, but alongside the initial collection of the interview data. The purpose of conducting the chart review was to provide a snapshot of recent practice in relation to augmentation for a sample of well first-time mothers who spontaneously laboured at term and presented to the tertiary Birthing Suite during the previous calendar year. The findings are presented as descriptive and inferential statistics. The data focussed on outcomes that enabled compliance with the Labour Dystocia Guideline to be assessed, but additionally included items that would enable me to assess whether adverse

outcomes were associated with augmentation, for example postpartum haemorrhage or admission to the neonatal unit.

For the most part, simple descriptive statistical analyses are applied to the data and are thus reported as frequencies, percentages, ranges and means. Odds ratios, chi-square tests and p-values are calculated when possible to describe the sample outcomes and infer the probability of selected areas of interest. No logistic regression analyses were conducted. Consultation with a statistician took place to ensure the correct tests were applied to the data and to support my interpretations.

Analysis of qualitative data

The analysis of the data derived from the interviews, focus groups and observation in the clinical setting took place concurrently alongside reflective writing and thinking, indeed these processes *were* aspects of the analysis (de Laine, 1997) because they enabled me to examine my biases and improved my reflexivity. The initial steps in the process involved data familiarisation. This was enhanced by the fact that I was the sole researcher on the project, conducted all the interviews and focus groups myself, and transcribed them myself also.

After each interview and focus group, I wrote a reflective piece about my impressions from the encounter while it was fresh in my mind. I transcribed each recording soon after the interview or focus group took place. I re-listened to the recordings with the transcripts alongside, to check that the transcripts were complete and that no snippets of conversation had been missed. I frequently re-read the transcripts (Hammersley & Atkinson, 1995). The transcripts were returned to each participant, including the focus group participants, providing an opportunity for correction of any misinterpretations and for confirmation that the participants remained happy for me to include their data in my analysis. These processes were very time-consuming, but my transcribing skills improved over time, and I appreciated the chance to repeatedly immerse myself in the content of the conversations.

I transcribed my handwritten field notes and journal entries into Word documents. I elected not to use a software programme for data organisation but having these as electronic documents meant that I could 'control f' to locate words, ideas and phrases quickly, rather than rifling through pages and pages of handwritten text. This process yielded an interesting insight. Often a concept I thought was described in a quite 'concrete' way that would mean I could 'control f' and find it quickly, was in fact expressed much more subtly and 'between the lines' and was therefore more elusive

to retrieve. As an example, when I was considering the concept of *power* and attempted to quickly locate places in the transcripts where this concept was mentioned by searching for the word “power”, in fact the quotes that *best* illustrated ideas about power were not so overtly expressed eg “I don’t know if you can really talk about progress of labour until I have decided if she really is in active labour” (*Rowan, doctors focus group*). This vindicated my decision to complete the data analysis without recourse to CAQDAS (computer-assisted qualitative data analysis software) because I felt it was possible that my human thinking capacity could ‘see’ things that might be missed by a software solution.

The interviews and focus groups took place over an extended timeframe. This meant I could carry out an initial line-by-line coding process on each transcript to begin to get a sense of the underlying ideas in each one. This subtly shaped the future direction of the research by expanding the areas of interest I could explore in my subsequent interviews and discussions with women and clinicians. In this way, the ongoing analysis decisions were a co-construction between myself and my participants as new avenues of exploration proved illuminating. Whilst it is possible that this process compromised my ability to reach saturation across all the interviews, I was surprised by the high level of congruence I found among the ideas expressed in each grouping, of women, midwives and doctors, and often in fact *across* groups as well.

This led me to see possibilities for triangulating data that I had not anticipated. For example, women described their onset and progress of labour, and the things that enabled them to ‘know’ that labour had begun and was progressing. Midwives and doctors similarly discussed their perceptions about labour progress, and there was a degree of resonance between the things that all three groups identified as markers for progress. Notwithstanding the common language spoken by clinicians in terms of ‘stages’ of labour, whereas women described a more ‘continuum’-style process, all three groups acknowledged subtleties that were beyond the purview of objective assessment tools such as vaginal examinations and partograms.

At the conclusion of all the interviews, focus groups and observation period, a virtual mountain of words sat before me. For a while when I opened each transcript to examine its contents, I had a sense of trying to hold the ‘big picture’ in mind but felt that the words in front of me were scurrying out of reach under my gaze. But I soon got to know them, and the repeated reading and re-reading ensured that the stories and my musings began to occupy space in my mind even when I wasn’t looking. The more I engaged with the data, the easier it became to see patterns, within and across the

'groups' of transcripts. The initial line-by-line coding revealed some frequently-occurring ideas that grew into jumping off points for deeper exploration. I collected together the concepts common to the women's transcripts, then the midwives' and then the doctors. Although the interview and focus group question schedules were different for clinicians and women, I observed that similar ideas had been discussed across groups. Thus it became possible to look at a concept from more than one perspective and further possibilities for triangulation became obvious.

Srivastava and Hopwood's (2009) Practical Iterative Framework for Qualitative Data Analysis proved useful as an overarching check on my processes. They propose that three driving questions remain front of mind during qualitative analysis:

"Q1: What are the data telling me? (Explicitly engaging with theoretical, subjective, ontological, epistemological, and field understandings)

Q2: What is it I want to know? (According to research objectives, questions, and theoretical points of interest)

Q3: What is the dialectical relationship between what the data are telling me and what I want to know? (Refining the focus and linking back to research questions)" (p. 78).

As I progressed with my data analysis, on many occasions I found myself writing reflexively about the ideas I was working with, only to realise how tangential they were to my research aims and research question! A colleague completing her PhD at the same time suggested I write my research question on a small piece of paper and stick it to the edge of my laptop, as an ever-present reminder to focus on how my analysis was able to contribute to answering this question. What sage advice.

I used a number of strategies to 'think with' my data (Hammersley & Atkinson, 1995), including mind-mapping and stream of consciousness writing techniques after re-familiarising myself at each encounter with the transcripts. As an example, one day I came up with the following conceptual maps (ways of thinking) about some of the data (Figure 3):

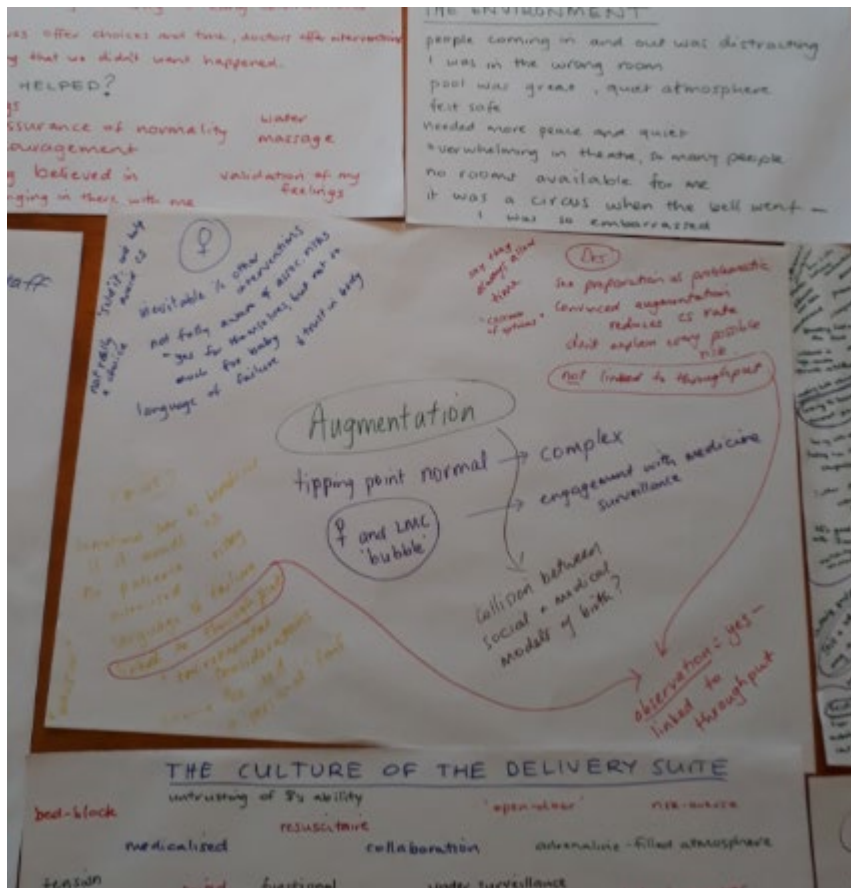


Figure 3: Mind maps of data during analysis phase

Having identified a number of ‘threads’ running through the data in this project, which involved engagement in the empirical and actual realms, I was motivated to find some structured way to delve more deeply into the ‘real’ level to consider which underlying mechanisms might be generating the outcomes observed. I drew heavily on the writing of Decoteau (2016) to help me make sense of this next set of steps in my analysis journey.

The ‘AART of ethnography’.

Decoteau (2016) elucidated an analytic pathway considered an appropriate ‘fit’ for ethnographic enquiry using a critical realist theoretical underpinning which she terms the ‘AART of ethnography’. The acronym stands for abduction, abstraction, retrodution and testing. A brief description of each concept follows.

Abduction is the process of identifying a surprise finding, and then constructing a causal explanation, so by inference developing new theory. Abduction involves both inductive and deductive thinking, because by following the hunch about the surprise finding, a deductive process leads to the casual explanation, and an inductive one

helps evaluate the hunch by empirical observation. Abduction requires conjecture, and positionality probably assists this process by having familiarity with possible explanations within the field of enquiry (Timmermans & Tavory, 2012).

Abstraction is “a move from the concrete details of empirical observation to the realm of the theoretical” (p. 72). The activities available to achieve this include ‘casing the phenomenon’ to posit possible explanations from within extant theory and deconstructing its component parts. “Abstraction attempts to unpack conjunctures, identify the constituent parts, and describe their internal properties” (Decoteau, p. 72).

Retroduction is the next step which involves building a model of a generative mechanism which, if it acted in the way the model proposes, would account for the observation of the phenomenon. Decoteau’s (2016) explanation is more eloquent than any paraphrasing I can accomplish:

“In retroduction, one theorises causal pathways that would explain how structures impact the events in question, which are then incorporated into conjunctural causal models (with multiple contingent pathways) ... It is in this way that *retroduction allows sociologists to link social structure and social action* [italics from original] ... retroduction seeks out a generative model of complex interacting causal forces as opposed to a single causative narrative” (p. 72).

In a complex and open social system like a hospital birthing suite, events and actions are highly dynamic and potentially endlessly changing. Therefore, construction of causal models can at best come close to explaining empirical phenomena but cannot be considered as ‘truth’ for all time. My positionality also demands that whatever explanations I proffer, are filtered through my biases and are therefore my interpretation of events in any given time and place. As Carter and New (2004, cited in Decoteau, 2016) assert, our theories can never be capable of capturing the ‘structured messes’ of social reality. This necessarily creates uncertainty about the usefulness of any theory I might contribute, but it does offer the potential for others to come along after me and, by adding their own insights, refine the theory further. One way that this might be accomplished is by continued **testing** of the postulated generative mechanisms, which is the final step in the AART of ethnography analytic process.

Researcher position and reflexivity

I am a midwife. This is the foremost position I hold as a researcher within this project. But I am many things besides, and each of these other positions I occupy cannot be extricated from the warp and weft of this research endeavour. As a woman and mother I have 'kinship' with the women participants, as a midwife with the midwives and doctors and as a researcher with expressions via words of all the intricacies of these intertwined relationships. Ethnographic data collection methods necessitate thoughtful reflection about how my knowledge, skills, experience and *who I am* have illuminated my research endeavour (van Maanen, 2011) as every decision I have made during the design, implementation and articulation of this project has *me* enmeshed it in its matrix. I will step out some of the considerations I made along the way by examining the relationships and the inevitable ways in which my beliefs may have shaped the analysis I am presenting and the conclusions I have drawn.

As a midwife with many years of experience at supporting women giving birth to their first babies, I hold an opinion about what I consider optimal as an outcome for these women. This is not necessarily that they have avoided all interventions in labour, but that they have emerged from their first birth experience emotionally 'intact' and have felt respected, informed and engaged with the decision-making processes that unfolded during their birth, whatever the outcome. My own midwifery practice is predominantly situated in an out-of-hospital setting (homebirth) and this limits my ability to 'know' core midwifery practice, or LMC midwifery practice that predominantly occurs within the tertiary hospital. My own three babies were born at home.

The choice to focus my study at the tertiary hospital was made because the empirical evidence suggested that a tertiary, rather than secondary maternity facility exhibited the highest rates of the intervention that I felt warranted further consideration. In the geographical region of the study, women have the full range of choices about birthplace, and yet the majority of them choose this tertiary hospital as their preferred option despite not requiring this specialist level of care. I have never worked as a midwife in this setting, so I felt this would enable me to bring a more open mind to my observations. Strong familiarity with a study setting can mean that 'usual' patterns of behaviour may not be 'seen for what they are' (Martin, 1989). I also hoped that the practitioners that I encountered at the study site would not have a prior 'story' about me, nor me about them, which might bias our encounters. Although several of the midwives and one of the doctors were known to me from other professional activities, I was unknown as a direct day-to-day colleague of these people.

Considering prior relationships

Once in my observational role at the site, I recognised that there were several midwives who were relatively new to practice (having graduated over the last five years) who I knew from my work with them in their undergraduate midwifery degree. My usual full-time employment is as a principal lecturer in a School of Midwifery. This had both a positive and negative potential; these women were used to being in a teacher-learner relationship with me which had involved assessment of their academic and midwifery practice development. I had also provided close supervision and pastoral support for some of them as their local small group tutor, debriefing their challenging (and joyous) clinical experiences. For some this meant a history of a quite close trusting interpersonal connection with me, and for others might have been an uncomfortable reminder of less happy experiences. What I quickly grew to appreciate once on site as a researcher, was that these women in a sense paved my way for developing my relationships with the other, unknown midwives. They did this by being friendly, welcoming, pleased to see me and very willing to talk with me about their experiences of working within the birthing suite as registered midwives. I concede that it is possible that their knowledge of my philosophical 'bent' for championing physiological birthing practices could have led them to communicate stories of practice that they knew would 'feed my story' about optimal environments for birthing. In reality I found them circumspect and somewhat protective of their working environment in their discussions with me.

In a similar vein, there were also four student midwives working in birthing suite during the time of my observations. Although I was not actively engaged in their education during that calendar year, I did know these women, and there were times that they still clearly saw me 'with my lecturer hat on'. On one occasion, I broke role completely as a researcher. It was a frantic morning with two "Category One" (ie time-critical emergency) caesarean sections occurring at the same time during the morning handover period. A student midwife had accompanied one of the women to theatre and witnessed a very traumatic resuscitation of the baby along with a significant postpartum haemorrhage for the woman. The student returned to birthing suite looking very shocked and upset, sat down and burst into tears. The midwife she was working alongside for that shift was still busy in the recovery area and there was no-one else around. I asked if she would like to come to a quiet room for a debrief, and we spent about 40 minutes discussing what had happened and planning her further steps for reflection about the incident and debrief with the other clinicians involved. I did not feel

any role conflict about this at the time – and on reflection am convinced it was the natural and ethical thing to do.

The other midwives I encountered were all new to me and for the most part were also friendly and welcoming. Many expressed interest in my project and over the first few days there were many questions about what I was doing there and what I hoped to find. I reiterated often that I had no preconceptions about what I might ‘find’ – that I was open-minded and very curious to discover the lay of the land. I felt like I had worked hard to appraise people of my intentions prior to my arrival and give them an opportunity to ask questions, and although my face was everywhere on their walls in the form of information posters about the study it seemed at first that some staff members felt unsure about my presence. As a tertiary teaching hospital there is frequent research activity being undertaken; during my time there, there were at least two other large multi-centre trials underway and although my research focussed on a different subset of women, the staff may have occasionally felt fatigued by the requests they receive to be assisting with recruitment of women to research studies.

I thought hard about whether, in ethnographic terms, I was an insider or an outsider in this space. I settled on neither, preferring instead to cast myself as an ‘alongsider’. Midwifery philosophy holds a strong underpinning belief in partnership, which in Aotearoa New Zealand is reflective of a deeper set of understandings about the relationships between indigenous Māori, and non-Māori New Zealanders. Partnership implies a relationship of reciprocity and shared responsibility, and I certainly felt that my time in the birthing suite was one of mutual sharing of understanding and co-construction of knowledge by virtue of the daily ‘checking in’ with the staff about my assumptions and my developing understanding of ‘what went on there’. As a midwife I had insider knowledge about the world of midwifery, women as birthing mothers and doctors as colleague health professionals. As a midwife who had never practiced in this particular setting, I was an outsider who needed to be ‘shown the ropes’ of day to day functioning. But as a midwife researcher, whose aim was to be immersed in this space, learning with and reflecting back to my peers, I claim my space as an alongsider. This is not a new coining of this term - it has been used to describe the relationship between birthing women and researchers conducting a video-ethnography in an Australian maternity setting (Harte et al., 2014), but I am pleased to continue its use as it is so resonant of midwifery understanding about ‘being with’, and as such is a perfect fit for midwifery ethnographic endeavour.

Challenges of observational research

Something I did really struggle with during my observation period was being present but unable to assist when my midwifery colleagues were so busy and burdened with the demands of their workloads. I discussed my feeling of uselessness with a couple of the midwifery shift coordinators, who reassured me that helping the staff wasn't what I was there to do, but nonetheless I felt guilty for not helping. I did attend the emergency bell call-outs, but on each occasion was not required to provide any practical assistance. I helped in other ways like doing runs for 'real coffee', answering phones if no-one was in the office, and also found that joining in some office rituals like bringing snacks and baking was warmly received. One shift coordinator suggested that my 'helping' would come later, by exposing their working realities. She said "if we say it, no-one listens, if *you* say it, maybe they'll take notice" (*from field notes*).

In relation to the doctors, their willingness to be interviewed about their clinical practice by a midwife may have posed some challenge. I sought to reassure them that I was genuinely interested in exploring their ideas and intended to present the findings of my interviews with them as compassionately as with all participants. In a clinical climate which has historically positioned midwives and obstetricians as "other" to one another (Reiger, 2008), I had hoped that the potential for using processes of mutual recognition in a research endeavour to remedy the dualism inherent in the historical context might create an opportunity which could be seen as a positive motivation for participating. However, doctors may have felt like they would be more 'visible' within the study due to their smaller numbers, which may be why only two doctors agreed to an individual interview.

In relation to the women, my position as a researcher and a midwife might have impacted on their willingness to share their stories, perhaps depending on their feelings about their relationship with their own midwife, or the midwife who worked with them during their birth. Women for whom this relationship was problematic or challenging, may have been drawn to participating as a way to 'tell their story' and therefore have engaged in a kind of resolution process (Bell, 2011). I have only engaged with women who volunteered to participate. Women who chose not to participate may have been dissuaded from participating because I am a midwife, in which case their story cannot be voiced.

The women were open, and really interested in my project, several expressed some hope that what they had told me would be useful and it was easy to be able to reassure them that it would be. For some women, I got the sense that telling their story had

some therapeutic value (Bell, 2011). “I don’t mind talking about it, not everyone wants to hear it and so I don’t really get to talk about it much, so it’s been really good to think about it some more” (*Diana*). At times during the interviews I found myself saying reassuring things or taking an opportunity to be educative, and had to check myself – it proved impossible to ‘take the midwife out of me’ if a woman was looking tearful or didn’t understand why her midwife would not do hourly vaginal examinations in the presence of ruptured membranes!

In preparation for the interviews I had read widely about interview technique (Bell, 2011; Ryan, Coughlin & Cronin, (2009), about holding a space that was strictly ‘being a researcher’ (di Cicco-Bloom & Crabtree, 2006), but also recognising that my many years of midwifery practice means that I am unable to have a conversation with a woman talking about her birth from a distant and detached place. So along with being mindful about my use of verbal encouragers and my body language, I found myself jiggling unsettled babies in my lap and expressing my pleasure and delight when Kimberly told me about pushing her baby out by herself “after all she had been through” (*Kimberly*). Whilst I acknowledge that this lack of detachment introduces bias, I also feel that the women warmed to my accessibility and this probably encouraged them to be more honest and open with me. At the conclusion of each interview, I offered the women to choose a merino baby vest from a collection I had knitted myself as a small gesture of my appreciation for their time. The women seemed genuinely touched by this, and it was a lovely way to conclude what had sometimes been an intense hour together.

Ethical considerations

Several of the ethical dimensions of the study have been presented already in this chapter. As a complex project there were many engagements with various ethics committees, institutional committees and the cultural advisory board. I am presenting the initial information relating to the project timeline and ethics processes as a diagram for ease (Figure 4).

	Mar 17	Apr 17	Jun 17	Jul 17	Aug 17	Sept 17	Oct 17	Nov 17	Dec 17	Jan 17	Feb 17	Mar 17	April 18	May 18	Jun 18
Proposal accepted	Yellow														
Audit			Green	Green	Green	Green									
Woman interviews				Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange
Clinician interviews				Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple
Observation													Olive	Olive	
Ethics approvals	Red	Blue	Pink	Blue	Red	Blue	Green			Blue		Pink	Blue	Green	

Key for Ethics Processes:

Graduate School of Nursing, Midwifery and Health Research Committee

Research Advisory Group-Māori endorsements

Locality Approvals at DHB

Health and Disability Ethics Committee approvals

Victoria University of Wellington Human Ethics Committee approvals

Figure 4: Timeline of ethics processes and data collection.

As a researcher in Aotearoa New Zealand, my status as a non-Māori researcher was considered at every step. Te Tiriti ō Waitangi is the foundational document in Aotearoa New Zealand which secured ongoing relationships between Māori as tangata whenua (the people of the land) and those who have come after (represented by the Crown, as Pākehā). In terms of application to research, the principles of partnership, protection and participation have been observed throughout this project, acknowledging the rights and interests of tangata whenua and my part in this relationship in ensuring these elements were considered.

Although a mainstream research project (Health Research Council [HRC], n.d.) it was anticipated and desired that Māori would be involved in the research either as women whose clinical records had been reviewed, as interview participants, or as midwives or doctors providing clinical care to labouring women. Wāhine and tāne Māori (Māori women and men) could have been present as support people for those who were interviewed. I remained mindful that for Māori the opportunity to participate in research that may yield benefit for Māori is optimal, but also that my position as non-Māori researcher may have influenced whether Māori wished to participate. Because hearing the voices of Māori, and the possibility for articulation of te Ao Māori (a Māori worldview) in relation to this topic would be a potentially beneficial outcome (HRC, n.d.), any wāhine or tāne Māori who indicated an interest in participating was offered the opportunity to be interviewed by a Māori research assistant who would conduct interviews utilising the seven general principals of kaupapa Māori research described by Tuhiwai Smith (2012). As an approach valued by Māori, *kanohi ki te kanohi* (face-to-face) data collection was adopted for all but the quantitative aspect of the study (HRC,

n.d.). Although women from a range of ethnicities chose to participate, none of them identified as Māori. Among the midwives who were interviewed or involved in focus groups, two of the thirteen midwives included Māori as an ethnicity alongside being NZ European, and no doctors identified Māori as their ethnicity. Eleven percent of the women whose records were audited identified as Māori. Consultation took place with the Māori Research Advisory Group outlining the ways in which Māori could be involved in the study and detailing the ethical conduct of the study in relation to all participants.

Study Rigour

Rigour within research describes the ways in which a reader can be reassured that the study has been conducted ethically, that the research design was appropriate to answering the research question, and that the overall conclusions of the study are supported by the findings. Maintaining integrity across the whole study requires that each aspect is handled 'true' to its methodological heart. Where multiple methods are used, the concepts relating to rigour in each method are identified. Quantitative and qualitative dimensions demand different requirements to satisfy the notion of rigorous enquiry. While internal and external validity are important to the chart review/audit component of this study, concepts of credibility, trustworthiness, dependability, transferability and confirmability come to the fore within the qualitative aspects of the project (Creswell, 2014; Denscombe, 2014). Gulati, Paterson, Medves and Luce-Kapler (2011) usefully demonstrated a reporting construct for rigour across their large critical ethnography, which I have co-opted because of its simplicity. It is reflected here in Table 2:

Table 2: Strategies to enhance trustworthiness and rigour of the study

Strategies	Application to the study
<p>Reflexivity – reflecting on how my background, beliefs and interests might influence the research</p>	<p>Journaling alongside the conception and implementation of all aspects of data collection, analysis and thesis writing.</p> <p>Addressed biases I may have and reminded me to keep the data at the forefront.</p> <p>Sharing findings as conference presentations during candidature. Ongoing discussions with academic supervisors.</p>
<p>Audit trail – written descriptions of research decisions to enable replication or later examination of rigour</p>	<p>Research journal contains descriptions of all research decisions, discussions with supervisors/statistician. All emails, transcripts, recordings kept for verification.</p>
<p>Field experience for observation – spending sufficient focussed time in the field</p>	<p>300 hours on-site, mostly on consecutive days to maximise follow-through of engagement with staff and women.</p> <p>Enhances dependability by addressing the consistency of findings.</p>
<p>Rich description – sufficiently detailed account of the study setting and events to allow assessment of transferability to other similar study contexts</p>	<p>Study setting and pertinent events fully described to enable comparisons to be made. Quotes used to support these descriptions increases sense of trustworthiness and credibility. High face validity from focus group data because of the believability of the comments of the participants.</p>
<p>Triangulation – utilising multiple data collection methods and canvassing different perspectives to seek corroboration across study methods and strengthen findings</p>	<p>Chart review, audit, document analysis, interviews, focus groups and observation used as data collection strategies. Improves confirmability and reliability of the study.</p>
<p>Sensitivity to exceptional cases or surprise findings – as further avenues to explore or theorise about</p>	<p>One woman participant was younger than the rest and perceived a different experience of interactions with doctors than the other women. Quantitative findings indicating a high level of unnecessary intervention, given an apparently enabling context for physiological birth, confirmed justification for overall study.</p>

Member-checking - reviewing transcripts to ensure accuracy and ongoing consent for inclusion of data	All the interview and focus group transcripts were returned to participants for member-checking. Requested amendments were typographical only.
Peer debriefing – external check of data by sharing findings and ongoing discussion with supervisors and peers.	Conference presentations during candidature, ongoing discussions with participants, supervisors and peers, submission of manuscript for publication.
Conducting the chart review/audit – clear decision trail written up	Academic supervisors involved with verifying the internal and external validity of the data collection tool. Statistician consulted for data analysis and interpretation of findings. Findings presented at study site. Empirical generalisability due to ability to extrapolate statistical findings to wider population.
Ethical and culturally competent conduct of study -	Multiple engagements with Ethics Committees at both national, local and facility level. Cultural consultation to ensure acceptability to potential participants who identified as Māori.

Confidentiality and anonymity for study participants

Additional to the elements of study rigour described above, anonymity and confidentiality for participants were addressed in a variety of ways. The chart review data were identified by a National Health Index (NHI) number when they were supplied to me on the spreadsheet by the hospital's Data Manager. This unique identifier was required so I could request the clinical records for the included women. Once I had the record, although her name and other identifying data were known, this information was not collected on the Data Collection Tool. Once the data was entered into the spreadsheet, the NHI numbers were deleted, meaning the working file used for the analysis contained only de-identified data. The inability of me as the researcher to link the line on the analysis spreadsheet to a particular person thus secured anonymity for this group (Allen & Wiles, 2016).

Participants who were interviewed or attended focus groups were invited to supply a pseudonym to protect their identities. Using Allen and Wiles' (2016) definition, their confidentiality could thus be assured, as although I could link their data with them, a

reader of the thesis or ensuing publications could not (p. 151). Two participants elected to use their own first names. This phenomenon has been particularly noted in literature that discusses how indigenous (Svalastog & Erikksen, 2010) or feminist research participants (Berkhout, 2013) prefer to see themselves reflected in research reports, as this inheres the right to be acknowledged as a source of knowledge.

In this study, a mixture of self-chosen and 'bestowed' pseudonyms was used. In cases where I chose the pseudonym, the participants were invited to change the name if they wished once they received their transcript. Only one name was changed during the research, and this was because a woman and a midwife chose the same pseudonym. The midwife agreed to this change. As the researcher I was intrigued to discover how quickly these people 'became' their new name in my mind as I worked with the data, so much so that I soon only 'knew' them as their pseudonym-selves as I worked with the data!

Identification of bias has been more fully addressed in the section where I discussed my reflexivity as a midwife researcher.

Summary

In this chapter I have described in detail the methods undertaken to conduct this research. I have also fully described my positionality in the research and the inevitable ways this has shaped its conduct and my interpretation of the study findings. Ethical aspects of the study including those culturally contextual elements pertinent to being a researcher in Aotearoa New Zealand were canvassed, along with an explanation about the steps undertaken to ensure study rigour. Now, onto the exciting part... at last it is time to dive into the data! Chapter Five describes the study setting and participants. The following three chapters (Six, Seven and Eight) present my understanding of what I saw and was told, based around the analytical frameworks of the empirical, actual and real dimensions that shape the 'reality' of the tertiary birthing environment, and how the mechanisms operating within this cultural milieu assist or hinder women in resisting the use of intervention, with a focus on the augmentation of labour.

Chapter Five - Birthing suite

Introducing the study setting

The built environment

Birthing Suite is located on one floor of a large clinical block at the regional hospital, with the antenatal, postnatal and neonatal units co-located on the same floor. The District Health Board (DHB) Women's Health Service accommodates women from a wide geographical area and is the tertiary referral centre for an even wider region. Approximately 3500 births take place there each year. Women of all risk levels may access the Birthing Suite for birthing, although the region also offers primary (midwifery-led) facilities and homebirth options. Access for women coming to Birthing Suite in labour during the day is via any hospital entrance and elevator to the women's health service floor, or at night, via an afterhours entrance monitored by security orderlies or an elevator within the basement carpark. The woman needs to phone the security office for activation of the lift, then once at the Birthing Suite door, ring a buzzer with an intercom (and camera) to gain access.

Once inside, the first thing seen is a very large upright banner reminding people to sanitise their hands. Next the woman encounters an administrator, who will most often welcome her and accompany her to a room that has been pre-allocated. Typically, the room is dimly lit and an obstetric bed occupies a central place along one wall. Each room has a birthing pool in the corner, and a small ensuite bathroom with a shower and toilet. The rooms are spacious, and inside the door is a curtain so that even if the door is open, privacy within the room can be maintained. The rooms also contain a resuscitaire, plastic cot, and equipment and supplies necessary for all vaginal modes of birth. A warming receptacle, known unaffectionately as the "pie-warmer" contains a package of hot cloths used for perineal support during birth.

Birthing Suite has twelve rooms for birthing women, located along two main wide corridors. Arranged along the edges of these corridors are both small and large trolleys that contain emergency equipment awaiting deployment, linen and consumables. On the walls are several notices, mostly these warn about things one *cannot* do: smoke, sit here, move the trolley. A central area within the Birthing Suite houses an operating theatre and recovery area. Three birthing rooms located closest to the central office are usually occupied by high risk women who require close supervision, and who are often not actually in labour. The small central office operates as a kind of hub, where the midwives have their shift handover. This is the space that core midwives mostly

occupy if they are not in a woman's room providing care. The midwifery shift coordinator is usually found in this office, as her role is one of managing acuity and movement of staff and women around the wards, interface between midwifery and medical staff, coordinator of tradespeople and general 'go to' person. Her role also includes providing clinical care when necessary, and midwifery consultancy for LMC and core midwives.

Other rooms in the vicinity house the 'drug room', anaesthetist's room, the whānau (family) room, the registrar's bedroom, a small kitchen and the 'Workroom' which is the space where the doctors hold their handover, and where LMC and core midwives can work if they are completing documentation, having a break or running small education sessions. Often this room doubles as a lunchroom for LMCs and core midwives as well. There is much ritual attached to the use of this room for the medical handover – the way the midwives vacate the room, even if they are busy and in the middle of doing something, the physical carrying-in of the Board from the central office, and the arrangement of staff around this room. On my third day there I became aware that I had disrupted this space by inadvertently sitting in the place usually occupied by the registrars, but I 'learned my place' and thereafter sat less obtrusively in the room.

There is one room designated as a 'normal birth room', whose contents encourage mobility and where the bed - which is an ordinary postnatal bed - does not occupy centre-stage. The use of this room provides a fascinating microcosm of the prevailing beliefs of the clinicians who choose to use it (or not). Some midwives feel the very existence of a normal birth room is problematic because it implies that normal birth does not or cannot occur in other rooms. They feel that every room should be an 'anticipated normal birth room' and that the designation of just one room for normal birth reflects the lack of belief in normality that pervades the Birthing Suite (*notes from reflective journal*).

Some midwives love using the room – they enjoy its quiet, slightly away-from-the-hubbub feel and its focus on providing tools to support physiological birth. These midwives tend to be (but are not exclusively) those who are comfortable supporting birth at home and in primary midwifery-led units also, who are familiar with the therapeutic use of intense physical presence and working with women who have not elected to have epidurals during labour. Others choose not to work in this room, saying that it "doesn't have everything you need" in it (*from field notes*). On further questioning, this appeared to relate to the bed not being capable of quick conversion for lithotomy, for example for suturing post-birth, or the anticipation that if a woman's

labour became complex, transfer into another room is required to facilitate interventions such as epidural or labour augmentation.

The people

Each day, core midwives work rostered shifts that are mostly twelve-hour shifts from 0700 to 1900 hrs and 1900 to 0700 hrs. Also available are eight-hour shifts; these tend to be worked by new graduate midwives who are also participating in a Midwifery First Year of Practice Programme, and some midwives who are working part-time. On occasions, a four-hour shift from 1900 to 2300 hrs can be added to support busy periods and cover sick leave where a full shift replacement cannot be found. A midwifery shift co-ordinator is rostered on each twelve-hour shift, along with three or four other midwives. Acuity is high most of the time and sometimes a midwife from the postnatal area may be seconded to provide additional support.

Lead maternity care midwives accompany women booked in their care when they come to Birthing Suite in labour. Most LMCs remain in the birthing room with the labouring woman and her family, apart from when consulting or having a meal break. Once the baby is born, they are required to remain for at least two hours after placental birth, after which time the woman can be transferred home, to a primary unit off-site, or to the postnatal area of the Women's Health Service floor, depending on the woman's wishes and clinical circumstances.

Also rostered on each day are a Senior Medical Officer (SMO) who leads and is available to the medical team for the day. An obstetric registrar is rostered to be available on Birthing Suite for consultation with LMC and core midwives. During the day the registrar is involved with performing elective caesarean sections as well as managing whatever evolves from consultations, and they are typically leading the care of the women admitted with complexity that require close supervision in consultation with the SMO. During the night, the registrar is available on-site, and is provided with a bedroom so they can sleep if the shift is quiet or when they are not required.

An anaesthetic team are present in the Birthing Suite and available for consultation with LMC and core midwives around the clock. Allied health providers such as social workers, lactation consultants and physiotherapists also come and go from Birthing Suite as necessary.

The core midwives and anaesthetic staff all wear scrubs, colour-coded according to practitioner role. The doctors typically wear smart casual attire, but often the registrar on-call for the day wears scrubs also. The administrative staff wear their own clothes,

as do the midwifery educators. Lead Maternity Care midwives typically wear their own clothes, but some of them change into scrubs once they are working alongside a labouring woman. They say this is about 'protecting' their clothes. Student midwives do not have a uniform per se but are quickly enculturated into wearing scrubs also. Some felt that this made them feel more like "part of the team", while others preferred that their individuality be recognised but acquiesced to the prevailing culture of attire (*from field notes*).

To the casual observer or family member, the wearing of scrubs sends a message about anticipating being in an operating theatre. Bobbie described how when her birth support person got changed into scrubs "... even the NICU staff thought she worked there and was off to theatre" (*Bobbie*). Despite that this is not an intentionally conveyed message, the wearing of a 'uniform' in this sense creates a silent hierarchy between staff members, and between staff and women and their families. Although I was keen to 'fit in' in this environment, I continued to wear my own clothes for the duration of my observation period. In part this was to reinforce that I was not here to 'work as a midwife' but also it was an expression of my philosophical belief that the wearing of a uniform is a subtle 'othering' mechanism intended to create a sense of distance or 'superiority' over others, which I avoid even when I am working as a midwife. All the staff also wear a lanyard bearing their identification photograph and swipecard used for accessing the ward areas, staff tearoom and drug room. In a nod to egalitarianism, all staff additionally wear a plain red name-badge, which simply says their first name and designation as either 'doctor' or 'midwife'. With the exception of this basic designation, there is no hierarchy associated with these name-badges, so if one is a consultant or a junior house officer, a new graduate midwife or a midwifery shift coordinator, anyone who is not aware of the role that person occupies would not know that they held any 'authority' or equally any 'juniority'.

The daily rhythm

The daily routine in Birthing Suite cycles around, 'beginning' with a midwifery handover at 0700 which takes approximately 30 minutes. This handover takes place in the small central office, with the doors closed. Everyone squeezes in and finds a spot to sit or stand wherever there is a space. A brief verbal account is given by the midwifery shift coordinator about each woman currently admitted outlining her progress, circumstances and any other information of note that is useful for all to know. The Board – a journey (white) board containing brief information about each woman is the focal point for the handover. Following the discussion, allocation of staff to each

woman takes place, taking into account the skill mix and also trying to provide continuity for women who have been present in the Birthing Suite for more than one day. The incoming midwives then have a one-to-one handover with the midwife from the outgoing shift about individual women, which is a more focussed discussion about each woman's care plan and her social circumstances. This strategy is designed to ensure that sensitive information not required to be known by everybody is communicated more privately to protect the women's confidentiality. The incoming midwives then disperse to greet their allocated women for the day and begin their care.

At 0800, The Board is physically transferred to the Workroom, for the doctor's medical handover, which is also attended by the anaesthetic and theatre teams and the midwifery shift coordinator. This handover typically takes about 45 minutes. The doctor's team of the day comprises the SMO, obstetric registrar for Birthing Suite, trainee interns and other registrars who are working in the antenatal and postnatal areas, and other clinics around the hospital such as the antenatal clinic. This handover is usually attended by between twelve and twenty people. It is a structured process, led by the outgoing obstetric registrar. The consultant usually sits on a chair in the centre of the room, the out-going and incoming registrars sit in front of the Board, and the other doctors arrange themselves around the edges of the room. The anaesthetic staff usually stand by the door. The midwifery shift coordinator often sits on a cardboard box behind the door. Handover begins with discussion about any current emergencies, and any elective caesarean sections for the morning. Following these two components the anaesthetic and theatre teams leave. The registrar goes on to review the Board and discuss each woman's circumstances and ongoing plans for her care. Once the women have been discussed, the consultant sometimes takes an opportunity to engage in a short session of quizzing the registrars and junior doctors (fifth- and sixth-year medical students and house officers) about a clinical topic. This is often related to a woman currently admitted and happens depending on how busy the unit is or whether current clinical concerns are more pressing. The incoming obstetric registrar then typically accompanies the consultant and junior doctors on a round, visiting each room and reviewing care with the woman and LMC or core midwife.

A further 'round the Board' review takes place in the early afternoon. This is a less formal affair with the midwifery shift coordinator, obstetric registrar and anaesthetic registrar in attendance. At 1500, the next shift of midwives who are doing eight-hour shifts arrives and a midwifery handover occurs as for the morning, and at 1600 a similar medical handover takes place also. This cycle repeats again at 2300 for the incoming overnight midwifery staff.

This daily rhythm seldom varies, although on occasion the medical handover is curtailed if there are current emergencies or urgent assessments required. It is into this cycle of events that women who arrive in spontaneous labour are inserted. They usually arrive with their LMC, which means little disruption occurs to the flow of the day, but if the woman's LMC is a private obstetrician or if their midwife LMC does not accompany them, the core midwifery staff have the admission of these women added to their schedule as necessary.

Temporal context for the study

During the data collection period for this study (2017/2018), there were some important happenings in the wider maternity sector in Aotearoa New Zealand that were influencing the maternity practice environment. These related to both historic and contemporary under-funding of maternity services at national and local levels, and to concomitant staffing shortages in hospitals and the community which were a result of mounting pressure on the midwifery workforce to provide more and more service within a fixed budget and as their numbers declined. It is beyond the scope of this thesis to document the history and political context which led to this situation (indeed this could be a PhD in its own right!) but suffice to say that the midwifery workforce as a whole was feeling beleaguered and under-valued at this time and many midwives were leaving practice due to the unsustainability of their working worlds. During the five weeks of my observation in the birthing suite, there were multiple days where the Birthing Suite was designated as being in a 'Code Red' situation. During one six day period alone, there were only five twelve-hour shifts where the birthing suite was *not* in Code Red. Code Red occurs when the Birthing Suite is full, and the antenatal and postnatal areas are also unable to absorb extra women and babies due to being at capacity. Coupled with midwifery workforce shortages, it is a testament to the commitment of these LMC and core midwives that women continued for the most part to receive supportive continuity of care during their birth experiences.

Media scrutiny was persistent with widespread coverage of women's experiences of care, the plight of midwives, strikes, protest marches and concerted political campaigns. The New Zealand College of Midwives was engaged in an ongoing struggle with the Ministry of Health to negotiate adequate remuneration for community-based (self-employed) LMC midwives, and via its industrial arm, MERAS, for employed midwives also. Whilst this was a backdrop to the national situation, the study site was no different and reflected these same pressures as for the rest of the country.

Introducing the women...

Nine women agreed to meet with me to discuss their birth experiences. These women met the inclusion criteria of having been at term, in spontaneous labour, having chosen to give birth at this hospital, and self-reporting that their pregnancies were low risk. All the women were interviewed in their own home, and were between six weeks and sixteen weeks postpartum, with the exception of Kimberly whose baby was seven months old. The interviews ranged in duration from 40 minutes to 75 minutes. Some basic demographic and clinical information about the women is presented in Table 3. Women were able to self-identify up to three ethnic identity categories in keeping with New Zealand's Ethnicity Data Protocols (MoH, 2017a).

Table 3: Characteristics of the interviewed women

Pseudonym	Age	Baby's age in weeks	Ethnicity 1	Ethnicity 2	Ethnicity 3	Epidural	Oxytocin	Mode of birth
Bobbie	20	7	NZ Euro			yes	yes	AVB
Cohen	36	6	Pākehā	Canadian		yes	yes	CS
Diana	37	12	Canadian	European		yes	yes	CS
Mary	31	15	NZer			yes	no	CS
JC	32	14	Chinese			no	no	SVB
Kimberly	34	28	NZ Euro			no	no	SVB
Maria	33	16	Niuean	Fijian	Tongan	yes	no	CS
Steph	30	6	NZ Euro			no	no	SVB
Nicole	27	6	S. African	European		yes	yes	CS

Given that the women had a choice of possible locations for birth, I had asked them why they had selected the tertiary hospital as their chosen place for birth. Their responses were consistent and centred around the hospital being considered the cultural norm, with their families' views being supremely influential in their decision-making, and the notion of being within the confines of the safety of the hospital just in case something was to go wrong. All the women acknowledged that they knew there were alternative options including having their baby at home. Cohen, Maria and Steph had considered homebirth, but rejected it in favour of being somewhere where they had options for pain relief and where there were doctors in case they needed help. The women had all identified that they experienced their labours as being long. Cohen, Bobbie, Diana and Nicole all had their labours augmented with an oxytocin infusion. Maria and Mary were both at the point of oxytocin being discussed following epidural insertion, but full dilatation superseded the commencement of augmentation. Kimberly, JC and Steph achieved full dilation and spontaneous birth after prolonged latent and active phases of labour without resort to either epidural or oxytocin infusion.

...and the clinicians

The midwives

In all thirteen midwives participated in formal semi-structured interviews or focus group discussions. Three midwives consented to an individual interview, and the remaining ten (two groups of five) to focus group discussions. In addition to this, more than twenty other midwives engaged in informal discussions during the period of observation in Birthing Suite. Thus a broad sweep of both core and LMC midwifery experience was explored during the overall data gathering processes. Among those midwives who participated in either an individual interview or focus group, Sam, Margie and Sarah were currently practicing as core midwives within the study site, and the remaining midwives were community-based LMCs.

The range of practice experience (including all years spent working with women in labour) among the midwives ranged from three to 44 years, mean 14.2 years. All the midwives were women. With two exceptions, the midwives had not provided care to the interviewed women. The range of ethnicities described by the midwives included Pākehā (non-Māori New Zealanders) and Māori. In keeping with the Ethnicity Data Protocols (MoH, 2017a), two midwives described Māori as one of their ethnicities. This information and specific information regarding length of midwifery practice and length of time spent working at the study site have been aggregated and are not provided in a table because this could enable individuals to be identified.

The doctors

Two doctors agreed to participate in a formal semi-structured interview, and a further ten doctors gave written consent to be included in a recorded discussion during their weekly education session, though only eight doctors actually contributed to the discussion. The range of practice experience among the actively contributing doctors was 4 years to 10 years, mean 7.6 years. Self-described ethnicities of the doctors included Pākehā, New Zealand European, NZer, Other Euro, European, Irish, German, Australian and Chinese. For the same reasons as outlined for the midwives, this information has been aggregated in preference to being described in a table to protect these participants' identities. Other informal conversations also occurred during the observation period with these and other doctors. Doctors were both women and men.

Summary

This chapter has presented a description of the place and the people as a means to provide a more focussed background for the upcoming results chapters. Although this thick description (Geertz, 1973) does not describe a ‘truth’ about it, given the ever-changing nature of what occurs in any hospital setting, it does offer an interpretation of an observed space and time, which has of course also been shaped by my presence as the researcher within it. With this environmental context as the backdrop, the next chapter begins with a short critique of the Labour Dystocia Guideline which describes expected practice in relation to suspected or diagnosed dystocia. A description of the outcome events for 239 low risk first time mothers who presented to Birthing Suite in spontaneous labour during the 2016 calendar year follows. The care of these women was specifically investigated in relation to the application of the institution’s Labour Dystocia Guideline, in order to establish whether the use of labour interventions (ARM and augmentation with oxytocin infusion) reflected the guidance in the document or were applied contrary to this practice guidance. The chapter goes on to explore the experiences of the women, midwives and doctors in relation to first birth and labour progress, using data derived from the interviews and focus groups. This data represents the *empirical* layer of critical realism’s ontological structure – what can be observed from the measurable outcomes and the textual data from our conversations.

Chapter Six

On being a well first-time mother, giving birth in a tertiary setting

Introduction

The previous chapter set the scene in order that the following three data chapters are contextualised for the reader. The purpose of this chapter is to present the data that relates to the *empirical* level as a ‘way of knowing’ from within the layered analytic framework– what was seen and experienced. This chapter addresses the research sub-question about the outcomes and experiences of women from both the quantitative findings and interviews with women. The current landscape of being a well first-time mother who is giving birth in a tertiary setting is thus revealed. With this milieu in mind, a brief critique of the clinical practice Guideline is offered prior to the presentation of the data from the retrospective chart review which provides a window into the outcomes for a larger sample of women who presented in spontaneous labour to the tertiary hospital during the year that this project was being conceived (2016). It is important for contextualising the experiences of the women who agreed to tell me the stories of their birth experiences within this environment. I acknowledge that the two aspects of the empirical level findings represent a change of pace for the reader in terms of being both quantitative and qualitative description. However the salient aspects of the women’s collected stories, alongside triangulated data from the interviews and focus groups with midwives and doctors and my observations in Birthing Suite, fleshes out an understanding of how giving birth in this setting was experienced by a small group of women.

Document analysis: Deconstructing the Labour Dystocia Guideline

The “Guideline: Labour Dystocia”, in use at the study site during the study timeframe was used to identify expected practice. Whilst this Guideline covers women of any parity, Appendix Two within the “Guideline on Management of Labour Dystocia – Primipara” was used specifically for assessment of practice for this study. This document outlines expectations regarding consultation with an obstetric specialist and subsequent management of dystocic labour.

The guideline was issued in 2014, with a review planned for 2017. It was informed by five observational studies, one randomised controlled trial and one meta-analysis. The publication dates of these studies ranged from 1976 to 2002. It is hoped that the overdue Guideline review has now taken place and more up to date evidence has been utilised to underpin the practice guidance it contains.

The following excerpts illustrate the 'flavour' of the document:

"The duration of labour varies from woman to woman and is influenced by parity. To establish the duration of labour and its different stages, regular vaginal examinations are required to assess cervical dilatation and descent of the head".

"The partogram is to be completed".

"Aetiological factors (for labour dystocia) include: increased maternal age and BMI, maternal exhaustion, dehydration, maternal distress, inadequate analgesia, diabetes, fetal macrosomia, malposition (especially occipito-posterior position), malpresentation (e.g. brow), obstructed labour and cephalo-pelvic disproportion ('CPD')".

"Factors include:

* problems with the Psyche (not coping, fear, exhaustion, anxiety)

*and/or problems with the Powers (poor contractions)

*and/or problems with the Passenger (malposition/malpresentation)

*and/or problems with the Passage"

"Primipara: In primiparous labours, poor contractions are frequently the correctable cause of labour dystocia. Occipito-posterior malposition is a common factor. Obstetric consultation is recommended when primipara fail to respond to conservative strategies. Studies have shown that primiparous labours progressing well (≥ 1 cm per hour dilatation) achieve a high vaginal birth rate $>90\%$. If slow labour can be corrected, the vaginal birth rate can be 95% , but when progress in labour does not respond to augmentation, the vaginal delivery rate is reduced to 22.7% ".

"Prolonged Latent Phase of labour: A prolonged latent phase can be an early manifestation of obstructed labour and has been associated with poor perinatal outcomes. Women who have repeat admissions to Birthing Suite or repeated presentations to their LMC but are not in established labour should receive individualised supportive care and obstetric review should be considered. There

should be an individual assessment of each woman to include specific considerations for risk factors.” (XXDHB, 2014).

The Guideline goes on to outline management of “Poor progress” in the first and second stages of labour. Regarding second stage, the Guideline states

“FTP (failure to progress) in the second stage is a challenge for the obstetrician”.

Deconstructing the language in this Guideline, there is an ample sprinkling of the words “poor”, “inadequate” and “failure”. Although the Guideline stresses the importance of individualising care and the provision of supportive measures including emotional support, the section describing “included factors” uses the very dated obstetric terminology about the “Psyche, Powers, Passenger and Passage”. This language effectively reduces the woman’s birthing body to a compartmentalised birthing machine. This totally marginalises the subtle interconnections of physical, spiritual, hormonal and emotional orchestration of the woman’s whole self, let alone the active participation in their own birth of her “passenger”, the baby.

Regular vaginal examinations are “required” in order to establish if progress is being made, and ‘progress’ is reduced to being about dilatation and descent. The subtleties of effacement and rotation are ignored in this definition, as are all the nuanced elements described by the midwives in their descriptions of recognising labour progress presented later in this chapter. The Guideline states that “prolonged latent phase is associated with poor perinatal outcomes”. It is curious that in this otherwise fully-referenced Guideline, this particular contention is not supported by any evidence.

With the exception of ‘inadequate analgesia’, all the aetiological factors for labour dystocia described in the Guideline are associated with the woman or her baby, suggesting that the situation of ‘failure to progress’ is their own doing. ‘Aetiological’ factors could reasonably also be associated with practitioner impatience, surfeit of neocortical stimulation from lights, noise, and surveillance mechanisms, and use of regional anaesthesia which is associated with reduction in contraction strength. Finally, I contend that slow progress in the second stage may perhaps be a challenge for the *woman*, rather than the obstetrician, as it increases her likelihood of interventions that pose additional risk to both herself and her baby. The tone and language of the obstetric-focused Guideline suggest a fundamental lack of belief in women’s ability to give birth unassisted, which echoes the sentiments expressed by the midwives about their medical colleagues in the later chapters of this thesis.

The findings of the chart review and audit – a snapshot of practice

The aim of the quantitative aspect of the ethnographic 'family of methods' is to assess the frequency of labour augmentation and associated outcomes for the sample of healthy first-time mothers and to audit practice against the Labour Dystocia Guideline. The sample of 239 cases selected for review closely resembled the population of all cases matching the inclusion criteria for the DHB during the same timeframe but who were not selected for review (Table 4) so the sample was considered representative.

Table 4: Demographic profile of all low risk, term, primiparous women presenting to facility in spontaneous labour during 2016.

All women n = 806 were para 0.					
	Women included in chart review n = 239		Women not included in the chart review n=567		P
	n	%	n	%	
Age					p = 0.62
under 20	13	5.4	21	3.7	
20-24	28	11.7	78	13.8	
25-29	70	29.3	142	25	
30-34	87	36.4	219	38.6	
35-39	37	15.5	94	16.6	
40 +	4	1.7	13	2.3	
Ethnicity					p = 0.71
NZ European	94	39.3	253	44.6	
NZ Māori	27	11.3	56	9.9	
Other European	42	17.6	83	14.6	
Pacific	13	5.4	38	6.7	
Indian	13	5.4	35	6.2	
Other Asian	40	16.7	80	14.1	
Other	10	4.3	22	3.9	
Body Mass Index*					p = 0.21
Missing	1	0.4	5	0.9	
Underweight	4	1.7	20	3.5	
Normal	156	65.3	329	58	
Overweight	57	23.8	143	25.3	
Obese	21	8.8	70	12.3	
Smoking status					p = 0.20
Missing	0	0	7	1.2	
Smoking	12	5	24	4.2	
Smokefree	227	95	536	94.5	
Gestation at labour					p = 0.33
37	9	3.8	32	5.6	
38	31	13.0	63	11.1	
39	79	33.0	156	27.5	
40	74	31.0	214	37.8	
41	45	18.8	99	17.5	
42	1	0.4	3	0.5	
Mode of birth					p = 0.23
SVB	145	60.6	309	54.5	
AVB	49	20.5	144	25.4	
EMCS*	45	18.9	114	20.1	

* Emergency caesarean section

From the 239 records reviewed, 59.8% of the women had labour augmentation in the form of either ARM or oxytocin infusion or both. Forty-seven women experienced ARM alone, 53 women oxytocin alone, and 43 women experienced both an ARM and oxytocin infusion (Table 5).

Table 5: Modes of augmentation

Modes of augmentation	n = 239	100 %
No augmentation	96	40.2
ARM only	47	19.7
Oxytocin only	53	22.2
ARM and oxytocin	43	17.9

No indication for augmentation was documented in most cases (Table 6).

Table 6: Documented indications for ARM and oxytocin infusion

Documented indication for ARM	n = 90	100 %
No indication for the ARM documented	62	68.9
Indications relating to perceived poor progress	9	10
“bulging membranes”	5	5.6
“prolonged latent phase”	4	4.4
“woman’s choice”	4	4.4
Maternal tachycardia	2	2.2
“contractions 2:10”	1	1.1
“to move lip” – presumed to rectify anterior lip of cervix	1	1.1
“fully dilated”	1	1.1
“for manual rotation”	1	1.1
Documented indication for oxytocin infusion	n = 96	100%
Indications relating to perceived poor progress	33	34.4
No indication for the oxytocin infusion documented	26	27.1
Prolonged ruptured membranes	17	17.7
Indications relating to poor frequency or quality of contractions	8	8.3
Malposition	3	3.1
Ruptured membranes and meconium liquor	3	3.1
Ruptured membranes and known GBS positive status	3	3.1
“Ruptured membranes and BMI”	2	2.1
“Ruptured membranes and unfavourable”	1	1.0

Overall, 145 women included in the review (60.6%) experienced a spontaneous vaginal birth, 49 women (20.5%) an assisted vaginal birth (ventouse or forceps) and 45 women (18.9%) had an emergency caesarean section (see Table 4, above). Using the New Zealand Ministry of Health definition, 64 women (26.7%) had a normal birth i.e. spontaneous onset of labour, no augmentation, no epidural, no episiotomy and a spontaneous vaginal birth. Regardless of the use of oxytocin infusion, spontaneous vaginal birth was most likely when no regional anaesthesia was used, although it is acknowledged that some women may have elected to have regional anaesthesia because of a recommended assisted birth (Table 7).

Table 7: Mode of birth and associated interventions

	No oxytocin No RA* n= 102 (100%)	No oxytocin + RA n = 41 (100%)	Oxytocin No RA n = 10 (100%)	Oxytocin + RA n = 86 (100%)	Total n =239 (100%)
SBV	91 (89.3)	17 (41.5)	9 (90)	28 (32.5)	145 (60.6)
AVB	8 (7.8)	16 (39.0)	1 (10.0)	24 (27.9)	49 (20.5)
EMCS	3 (2.9)	8 (19.5)	0 (0.0)	34 (39.6)	45 (18.9)

*RA= regional anaesthesia (epidural or spinal)

For seventeen percent (n=41) of the women, an assessment at home prior to hospital admission was documented in the clinical record by their midwife. These women were significantly more likely to be in active labour on admission to hospital, compared to those not seen at home ($p < 0.001$) but - although approaching significance - were not less likely to receive an augmentation procedure (ARM or oxytocin) ($p = 0.05$) (Table 8).

Table 8: Home assessment in labour

	Any augmentation		P value
	n	%	
Home assessment documented			0.05
Yes n=41	30	73	
No n=198	113	57	

Among the whole group, women admitted to hospital in active labour were significantly more likely to have a spontaneous vaginal birth than those who were admitted in the latent phase of labour ($p < 0.001$) and were also less likely to be augmented with oxytocin ($p < 0.001$).

Among women who experienced any augmentation procedure prior to 4cm dilatation (excluding the women with prolonged rupture of membranes over 24 hours), there was a higher incidence of caesarean section when compared to women whose augmentation procedure/s were performed after 4cm had been reached ($p = 0.004$) (Table 9).

Table 9: Mode of birth in association with 'early labour' augmentation

Augmentation: ARM and/or oxytocin infusion	SVB	AVB	EmCS	P value
	N (%)	N (%)	N (%)	0.004
Any augmentation ≤ 4cm n=42	16(38.1)	7(16.7)	19(45.2)	
Any augmentation > 4cm n=79	40(50.6)	25(31.7)	14(17.7)	

ARM artificial rupture of membranes

SVB spontaneous vaginal birth

AVB assisted vaginal birth (ventouse /forceps)

EmCS, emergency caesarean section

When labours that included augmentation with oxytocin infusion were compared with those with no oxytocin infusion, several differences in outcomes were demonstrated. Women who were augmented with oxytocin were more likely to use pharmacological pain management techniques, have a primary postpartum haemorrhage (>500mL), or caesarean section, and were less likely to have a spontaneous vaginal birth. Their babies were more likely to exhibit abnormal heart rate patterns during labour and were less likely to receive skin to skin care and be breastfed within the first hour of life. No differences were found with respect to Apgar score under 7 at 5 minutes, or admission to NICU (Table 10). These odds ratios are unadjusted, and therefore do not take account of the potential interactions where more than one intervention has been applied, for example oxytocin infusion and regional anaesthesia in combination.

Table 10: Comparison of outcomes between labours that were, and were not, augmented with oxytocin infusion

	No oxytocin infusion n (%)	Oxytocin infusion n (%)	OR (95% CI)	p
	n=143	n=96		
Pain management^a				
Non-pharm only	34 (23.7)	2 (2.0)	0.06 (0.18-0.59)	<0.0001
Entonox only	55 (38.5)	7 (7.3)	0.13 (0.05-0.29)	<0.0001
Opioids	10 (6.9)	11 (11.5)	1.72 (0.70-4.23)	0.23
Epidural/spinal (NB – RR) ^b	41 (28.7)	86 (89.6)	3.12 (2.39-4.08)	<0.001
Blood loss - PPH	n=142	n=96		
≥ 500mL	27 (19)	40 (41.6)	3.04 (1.70-5.45)	0.0001
FHR abnormalities^c	n=84	n=95		
Tachysystole	11 (13.1)	64 (67.4)	13.7 (6.37-29.45)	<0.0001
Hyperstimulation	9 (10.7)	59 (62.1)	13.7 (6.10-30.58)	<0.0001
Mode of birth	n=143	n=96		
Spontaneous vaginal	108 (75.5)	37 (38.5)	0.20 (0.17-0.36)	<0.0001
Forceps/ventouse	24 (16.8)	25 (26.1)	1.75 (0.92-3.29)	0.082
EMCS	11 (7.7)	34 (35.4)	6.58 (3.13-13.85)	<0.0001
Neonatal outcomes				
	n=143	n=96		
Apgars < 7 @ 5min ^d	3 (2.1)	3 (3.1)	1.5 (0.30-7.62)	0.46
Skin to skin in first hour ^e	n=139	n=87		
	123 (88.5)	64 (73.5)	0.36 (0.18-0.73)	0.0038
Breastfed in first hour ^f	n=136	n=90		
	83 (61.0)	42 (46.7)	0.56 (0.33-0.96)	0.034
Admission to NICU	n=143	n=96		
	9 (6.3)	12 (12.5)	2.13 (0.86-5.26)	0.096

^a percentages do not add to 100% because more than one type of pain management was used in some cases

^b risk ratio presented due to inflation of OR with frequency of epidural use (the OR was 21.39)

^c denominator for assessing FHR abnormalities was 179 from available cardiotocograph recordings for women who were continuously monitored with and without oxytocin infusion.

^d Fisher's exact test.

^e data were missing for 4 cases in 'no oxytocin' group and 9 cases in 'oxytocin' group

^f two women had elected to artificially feed (n=237), and data were missing from 5 cases in 'no oxytocin' group and 6 cases in 'oxytocin' group.

Audit of practice against the labour Dystocia Guideline

The Labour Dystocia Guideline contains one auditable standard, which is that “primiparous women will not remain undelivered after 5 hours in second stage”. In this sample, there were three (3) women who had a second stage longer than 5 hours.

The only specific documentation requirements relate to prescription of the oxytocin infusion, and the guideline states – “The Registrar writes instructions for the use of oxytocin and individual review of progress in the main notes”. Adherence to the Guideline in this respect was low (Table 11). There was high compliance with prescribing in the woman’s medication chart.

Table 11: Documentation standards adherence

Recommended practice	Number of cases	Adherence
Written instructions provided	54 of 96	56%
Timeframe for review documented	29 of 96	30%

There is no requirement in the Guideline for the registrar or consultant to assess the woman in person prior to prescription of oxytocin infusion, however this is accepted as best practice within the institution. There were 25 cases (26%) where oxytocin infusion was commenced without documented evidence of the woman being assessed in person by the registrar or obstetrician LMC, although a verbal consultation had occurred.

The Guideline outlines indications for consultation with the obstetric team regarding labour progress, and for management of identified delay in labour. With respect to consultation requirements when suboptimal progress was suspected or diagnosed, and irrespective of which stage in labour the woman was in, the Guideline was well adhered to (Table 12).

Table 12: Indications for specialist consultation

Indication – first stage	Adherence
Requested epidural (all requests for epidural are approved by a doctor)	51%*
<1cm/hr, 2hrs after ARM	100%
Secondary arrest	100%
Failure of pp to descend	100%
Women with oxytocin infusion	
<1cm/hr over 3-4 hrs	100%
Baby not born after 8hrs	100%
Baby not born after 1 infusion bag	N/A
Indication – second stage	
High presenting part/failure to descend	100%
Excessive moulding or caput	No cases
Presenting part not visible after 60 minutes pushing	N/A
Spontaneous birth not achieved after 90 mins of active pushing (A)	85%
Spontaneous birth not achieved 120 minutes after diagnosis of 2 nd stage (B)	92%

** all epidurals are 'approved' by a medical practitioner, the 51% relates only to whether this consultation was documented in the clinical record*

With respect to (A) and (B) above, in all cases it was clear that the baby's birth was imminent when the 90 minute and 120 minute timeframes were reached. Each of these babies were born within ten minutes of the recommended time limit.

With respect to the management of delayed labour, there were 78 instances where practice did not reflect the guidance in the document (Table 13).

Table 13: Management of delayed labour as per Guideline

Recommended management	Adherence
No woman undelivered after five hours	98.7 %
Vaginal assessment 2 hours post ARM	60%*
Consultation prior to oxytocin infusion commencement	98%
Oxytocin infusion if delayed progress last 3-4 hours	70.8%**
Continuous EFM if oxytocin infusion in place	100%

**in 20 cases, the baby was born within 2-3 hours of the ARM so these were not included and thus the denominator was 70. In 16 cases, oxytocin infusion was commenced within two hours of the ARM, thus departing from expected management.*

*** in 28 cases, oxytocin infusion was commenced in the presence of adequate progress over the last 3-4 hours and was therefore used unnecessarily*

Additional to those described in Table 13, there were 24 cases where the ARM was not indicated e.g., where the indication documented was not related to progress, such as “bulging membranes”, or “fully dilated”, or where the indication was not recorded, but the narrative description in the clinical record contained no obvious indication. There were seven cases where no VE had been documented for over 2 hours (in 3 cases, over 3 hours) prior to commencing the oxytocin infusion, so it cannot be known whether progress which might render the infusion unnecessary had taken place. The instances of departure from recommended practice relating to augmentation represent 32 percent of cases, meaning that almost one third of the interventions may have been applied unnecessarily.

This quantification of the use of unnecessary intervention (ARM or oxytocin infusion being implemented in the absence of a documented clinical indication) provides evidence that the intention to examine this phenomenon more closely is warranted, in order to understand the underlying mechanisms that might give rise to this permissive miss-application of labour interventions even in the presence of clear practice guidance.

These results were presented to a multi-disciplinary meeting of maternity clinicians at the study site and prompted animated discussion among those present. One senior obstetric consultant intimated that if he “had his way, every woman would be ARM’d and augmented as soon as she walked in the door” (*from reflective journal*). The findings strengthened my resolve to understand why this frequent use of unnecessary augmentation might be occurring in this maternity setting where the majority of ‘low risk’ women are cared for in a midwife-led, continuity of care model. The morbidity for women and babies associated with the use of oxytocin infusion described in the Chapter Two literature review is reflected within this sample, and the knowledge that in one third of cases the interventions were applied without sufficient justification begs the question about what gives rise to this situation, and what can be done about it. Into this milieu step the women, midwives and doctors whose voices will now rightly dominate the remainder of this chapter.

Hearing their voices; women and clinicians discuss first birth

Expectations and preparation for birth

A number of health professionals spoke about their perception that women had high or unrealistic expectations when it came to giving birth for the first time, and that the reality of giving birth inevitably led them to feel disappointed when their actual experience did not match their anticipated experience. One doctor suggested that this could be related to the increasing rates of postpartum distress women in our community are reporting

I hate the word (*sic*) natural labour... it just has connotations, and it's such a... the way women perceive they went in labour, you know, I just hate all that stuff 'cause I just think... that's the root of a whole lot of postnatal problems for women, you know the disappointment and all those things (*Lydia, doctor*).

Another doctor also felt that the “developing trend” of a detailed birthplan could be problematic... “maybe entering it with such fixed ideas, and then clearly not having any control over it, it sort of sets them up for a feeling of failure” (*Dr L, doctor's focus group*). Some midwives too felt that women had an expectation that as soon as they came to the hospital, their baby would be born, rather than understanding that first birth could take a long time, “some women have such unrealistic expectations, they come in here at the first pain and expect us to fix it” (*core midwife, from notes in reflective journal*). The written birthplan was often mentioned during handover, and was a subject of mirth amongst some practitioners;

“In room 6, there's (*names woman*), she's a low risk primip, the midwife hasn't consulted but there's a two page birth plan...”

“I heard that in it she *invited* the LMC to the birth”

(laughter)

“is it laminated?” (more sniggering)

“oh well, this is the one that will get interesting later, when she needs us” (*exchange during shift handover, from fieldnotes*).

Far beyond these few words used – are a deep array of beliefs that permeate the environment of this labouring woman. A number of assumptions are playing out here, both inside and outside her room. Assumptions about needing to resist a culture of

intervention, about keeping the woman outside the purview of medicine by protecting her space, about being a woman with “high expectations” that will no doubt need help, because she has no idea what labour is really like.

Paradoxically, despite the suggestion that women hold high and unrealistic expectations about birth, the doctors who were interviewed both shared an opinion that women are poorly prepared for labour by midwives and by antenatal education classes, and that this led to women not knowing what to expect.

I do think some women are completely unprepared for what it's actually like. I don't know if it's their outlook, what the midwife talks to them about, you know I know that midwives have very limited time with women, so I don't know if you get good time to explain things (*Anna, doctor*).

Lydia explained this a little more fully and related it to her own experience as a new mother

...the other thing I wanted to say is that I do think, and I don't know how to change this, but I do think that women are quite poorly prepared for their labour and birth experience

Suzanne: oh, right...

Lydia: that's my impression also as a recent mum, and being in mum's groups and stuff... like I feel the midwives do their very best to educate the women beforehand, but I think their actual preparation in terms of what to expect and how long things can take, I think is quite unrealistic

Suzanne: okay...

Lydia: and I think a lot of antenatal education programmes, well, certainly the one I was involved with, was very poor.

Suzanne: hmm – do you think it sets people up to have an unrealistic idea about it?

Lydia: yeah, it was very normal birth and labour focussed, which is fine, I think it needs to be the focus, but I don't think it talked enough about early labour and what it's like, and how long you might be at home for, and what sorts of things you should be doing there, like eating well, and getting rest and all that sort of stuff, drinking too ... and I think that their coverage of interventions was very poor (*Lydia, doctor*).

Bearing in mind the temporal conditions described in the previous chapter, when the doctors were discussing women being admitted in early labour, the following exchange alludes to this lack of preparation also but expresses some empathy for the LMC midwives' position

Lydia: well, mostly it's the woman refusing to go home, you know, the LMC has done everything to try and give them really good advice, you know, good hydration all that, but the woman just refuses to go, you know I think it's completely unrealistic to expect the LMC to stay with them all night

Riley: and then they'll end up with morphine or temazepam

Lydia: well, you know, when you're getting paid a dollar an hour...

Suzanne: well, yeah, also, if you want to be there at the end, you can't necessarily be there from the beginning

Lydia: and it should be the family and the support people doing the early labour stuff... that's not the midwife's job, midwives just can't be with women all that time... (*Lydia, doctor*)

This impression of ill-preparedness was at odds with how the interviewed women described their expectations for birth. They were clear that they felt well-prepared for birth and that they understood the potential for their birth to take a long time. Although they had developed plans with their LMCs in order to articulate their wishes and take responsibility for their decisions, they were flexible about how these plans might be utilised and were accepting that their birth might well not go 'according to plan'. Nicole expressed it thus:

Yes, we went through a birthplan with (midwife), we had several copies....so yes, we had a plan, but I wasn't set on it, there were things I thought would be nice, but I wasn't too phased about it (*Nicole*).

Kimberly had some ideas about avoiding pain relief, but said

...the original plan was we'll just see how we go, and if I can do it without pain relief then I will, but the whole way through was... well, I don't know what I'm getting myself into, so I may need it (*Kimberly*).

Kimberly said that the unknown nature of birth meant that flexibility was the key to her feeling safe and keeping her options open allowed her to make decisions based on what was *actually* happening rather than what she thought she might want in advance. All the women described expecting that labour would be painful and slow, and felt well-prepared to meet this challenge. Most of them had undertaken some preparation during pregnancy by attending yoga or stretching classes, hypnobirthing and calm birthing sessions or had practiced massage, acupuncture and breathing techniques during antenatal classes and later at home with their partners and support people. It is possible that these women who were motivated to contact me to discuss their births had had different antenatal experiences regarding their preparation for birth than those the doctors described. Despite reporting feeling well-prepared, some of the women were surprised by the intensity of their contractions quite early on in their labours, and this had the effect of making them doubt their ability to meet the challenge of advanced labour. Cohen said

I had it in my head that, especially after doing some of the hypnobirthing techniques ... and watching the odd video, I had it in my mind that I would just...I would sort of feel like I had period cramps coming on, and I would just lounge on the couch here, and cuddle with the dogs, and I'd do some deep breathing and it would...it would just, you know, hurt a little bit, take some deep breaths, and it would be minutes, ten minutes, fifteen minutes, twenty minutes between contractions and they wouldn't last very long, and it would just gradually come on, and get more and more intense. And I think because it came on, what felt like, so suddenly and so painfully, it made it feel like that first half of labour was much, much more intense than I had ever expected (*Cohen*).

and Diana, following an early labour examination at home, described how ...it was one, and then it was three. I think that's how it was. So, I was really surprised by that because I was really, like, I am sure I am ten centimetres right now, you know there was *no way* that this could get any worse. I remember thinking, wow, if this is how it feels now, there's no way I'm

going to be able to push him out because it's going to be worse than what I'm feeling now (*Diana*).

Although all the women articulated that they had held a desire to have a 'normal birth', there were mixed responses when I asked them about how they were feeling about their birth experiences after the fact. With regard to how they felt when this desire was not their reality, Cohen described feeling sad that she had had a caesarean section but said

I feel much better now than I would have thought I would, given that I had a failed ventouse attempt and syntocinon and a c-section and all of that. If you'd told me six weeks before giving birth that I would have all of that, I would expect to have still felt dreadful about it, but...I mean, it happened the way it happened, and I felt well cared for the whole time, um, I felt like the few things I asked for, which was mainly the epidural, even though it took a long time to get it in, they were trying from very soon after when I asked for it, so I felt like my requests were met, and everybody was nice and seemed competent and experienced and, so I feel okay about it now (*Cohen*).

Diana, on the other hand, described her birth as "the worst 30 hours of [her] life" and said "I don't look back on it and think 'well, that was a nice day' you know, my baby was born that day but I don't look back on it thinking... it was ... (*long pause*)... joyful, in any way" (*Diana*). Following a debrief with her midwife and student midwife a few weeks after the birth, Diana had developed a clearer understanding of the impact her baby's posterior position had had on her progress. She said "So, that kind of made a big difference for me, I was like, 'Oh, so that's why it was so different, because all those other women that I had talked to didn't have that', and so, that's made it all more bearable for now, I guess" (*Diana*). Diana's experience highlights an important point about how midwifery continuity of care can create crucial space for debriefing, leading to resolution and improved self-perception for women about their birthing abilities.

The LMC midwives during their focus group discussions reiterated the importance of preparing women well antenatally for supporting themselves during early labour, and

also helping women's families to understand how they could help women through this time. These midwives were unanimous that assessing women at home prior to admission to hospital was an important strategy for avoiding the cascade of intervention, by optimising the chance of women entering hospital only once labour was well established, thus limiting their exposure to the scrutiny of medical oversight and 'clock-watching'. This strategy appears to be well-founded – as revealed in the chart review when women were seen by their midwife at home in early labour they were more likely to enter hospital beyond 4cm dilatation than when they were not seen at home prior to admission (88% compared with 54%, $p < 0.001$).

Women's stories: the onset of labour

The women were all able to recognise the onset of their labours, even though they experienced this differently. For Nicole, Cohen, Steph and Mary, their first inkling that something was happening occurred with the rupture of their membranes. For Steph it was half a day before her contractions began, but Nicole, Cohen and Mary all began contracting within an hour of their membranes rupturing. Diana was alerted by a blood-stained show, with contractions beginning a few hours after this, and for Kimberly, Bobbie, Maria and JC it was the onset of contractions that they recognised as the beginning of their labour. Each woman said she 'just knew' it was labour, although JC felt a bit unsure at first and spoke with her sister-in-law who helped her to 'diagnose' what was happening. Mary had a "strong intuitive sense" during the day about labour being imminent, so she told her partner about this and they "packed [their] hospital bag and ran through everything that was in it, so he would know where things were" (*Mary*) and went to bed. Mary's membranes ruptured at 1am! The women described feeling "different", and "excited" about their labours beginning. Apart from Bobbie, who was quizzed by her mother about what was going on when she was in some obvious discomfort, the women all first told their partners/husbands that 'something was happening' and they made plans for the hours ahead regarding whether or not their partners would be going to work. Their midwife was the second person they contacted to communicate the news that labour had begun, except for JC whose LMC was a private obstetrician; she called the hospital and spoke to a core midwife.

Managing at home

Because they all knew that first birth could be lengthy, none of the women made immediate plans to go to the hospital, but rather waited until they felt their contractions were strong and regular. Diana, Bobbie and Mary were all visited at home by their midwife (or back-up midwife) prior to going to the hospital. Nicole waited a few hours

but then arranged to meet her midwife at the closer local primary unit first because her labour appeared to be progressing very quickly. It was the morning rush hour and her midwife wanted to be sure that it was safe to attempt to get to the more distant hospital, rather than risk having the baby born *en route*. Steph, JC, and Cohen all went into the hospital for assessment, but elected to return home when it was clear that labour was still in its early stages.

Several of the women understood that arriving “too early” at the hospital was not ideal because of the increased likelihood of interventions occurring and set about distracting themselves from the discomforts of early labour in the comfort of their homes. Mary described her feelings about being at home thus

I was in control here, and I knew where the shower was, I knew where the bedroom was I knew where the ball was, I just knew ...we had our soundtrack on, we had a movie that I had attempted to watch the first five minutes of to try to distract myself... (*Mary*).

and Bobbie said she was “more comfortable here, just being in my bedroom, and dealing with it on my own as long as possible”. She trusted her instincts:

I was also trying to eat, and get comfortable, well, snack... ‘cause I felt like I wouldn’t get to eat for awhile ...just crouched over, pretty much, squatting, that was the best position for me, and on my knees, putting my hands and knees on the floor...I guess all natural positions... but I didn’t *think* of doing it, I just did it, I don’t know, I think your body just tells you to do it (*Bobbie*).

Diana adopted a different approach. She wanted to clean her house, said she was “determined to clean the bathroom, I just knew I wanted everything clean and that I wouldn’t be able to do anything after, so I cleaned the shower...” (*Diana*) and JC decided that a supermarket shopping expedition would help to keep her mind off the contractions.

But each woman was adamant about determining their own decision to move to the hospital, even where this appeared to conflict with the advice they were given by their caregiver. Steph said

I called the midwife and said 'should I come in now, I am really, really sore' and she listened to me for about ten minutes and she heard the spacing and I was vocalising pretty hard and she said 'oh, you're still a bit chatty between contractions' and I said... 'no, you don't know...we're coming in now' 'cause I just *knew*... so we drove to the hospital, and that was pretty intense (*Steph*).

Kimberly decided to eschew the midwife's offer of a home visit, saying

So our midwife, we probably told her when we were leaving, probably would have liked to come and examine me here, before we went to hospital, but we pre-empted and went anyway, we were like 'we're in the car, we're going anyway' (*Kimberly*).

and as her midwife had anticipated, she was in very early labour on arrival to the hospital. Kimberly went on to say

...they were like 'well, you don't really need to be here, you can go home if you want to' but I was like, 'I don't want to go home' so we had that great big discussion. Conveniently they did have enough space for me, I think if things were a bit busier I would have been sent home, no matter what (*Kimberly*).

Diana remembered feeling pretty frustrated about being told not to go to hospital yet. She said her midwife kept on saying "when it gets worse" but Diana said

Well, I don't know what worse is... I thought she's not taking me seriously because I am not screaming on the floor... and I don't know what's worse... they were pretty close and they were long, but not long enough that she wanted me to rush into hospital. All that she did made sense later, but at the time I felt like I needed to go to the hospital, and she was like, no, you're fine. But finally, we just said, 'no, we're going.' (*Diana*).

Getting there – moving to the hospital

Nicole travelled to the hospital in an ambulance from the primary unit because after being assessed at 7cm and in apparently strong labour, her midwife felt it would be the

quickest journey through the morning rush. The journey took about 45 minutes, and Nicole said this felt “very long...I was looking out the window, we were stuck in traffic... I was nervous that oh, my word, I’m going to have this baby on the side of the road and my husband’s not going to be here” (*Nicole*) so this was a fraught experience. The other women all travelled to the hospital in their private cars, variously described as “uncomfortable” (*Cohen*), “difficult” (*Diana*), “too much... on all fours in the back seat” (*Steph*) and “not fun, by any means” (*Mary*).

Each of the women recounted their arrival at the hospital, which most of them recalled as difficult in some way. They described a sense that some kind of test had to be passed to gain entry beyond the locked doors of the Birthing Suite and, in some cases, beyond the carpark. During the night, which is when most of the women went in, access requires firstly convincing a security guard that you are indeed a woman in labour, and then finding your way through the “rabbit warren” (*Steph*) to the doors of Birthing Suite, where another opportunity to “prove your need to be there” (*Kimberly*) arises. During the day, the journey is more straightforward because more entrances to the hospital are open, but often there are corridors full of people which Mary struggled with; “I was quite embarrassed... but really feeling like I was trying to climb my way through ... so I’m screaming in the hallway and there’s no-one else making any noise...” (*Mary*). Bobbie recalled getting out of the lift, and

... having a contraction ... having to hold onto the rail... and one of the nurses was going to come up and touch me and that’s a no-no... I don’t like being touched anywhere, even when I’m not in pain, and my mum goes ‘oh, no. no, no, don’t touch her...’ (*Bobbie*).

Steph’s recollection of going to the hospital was that it was

... particularly challenging... you’re having to stop every two or three minutes...it’s like a maze...you park in this dingy underground thing... get to the elevator, you’ve got to buzz this buzzy thing and the security guard has to let you in... that took two or three minutes but felt like an eternity... through the rabbit warren, then to the birthing suite and you’ve got to buzz the buzzer there too... it took a long, long time to get through there... (*Steph*).

Staying there – convincing others it's labour

Once there, at varying points in their labours, the women were 'allowed to stay' or 'told to go home'. Being in early labour rather than established labour on arrival to the hospital necessitates a decision about remaining there or returning home to await further progress. The decision to stay or go for Kimberly and JC was made on the basis of the busy-ness of the ward at the time. This is partly because the woman's LMC is not required to remain with the woman in the Birthing Suite if labour is not yet established and in this instance the core midwives are expected to 'keep an eye on' these women in the absence of the LMC. For JC, whose LMC was a private obstetrician, the core midwives were providing her labour care anyway, but when she came to hospital the first time, "all the rooms are full, and so I ended up going into another room ... a kind of off-room by the recovery bit where people go when they're being operated on..." (JC). After an assessment JC was advised to go home, which she described as "a bit of a pain" but agreed to do. Kimberly really didn't want to go home, and she felt that it was only because it was 'quiet' at the time that she was allowed to stay.

The midwives and doctors expressed strong opinions about the notion of women being in hospital "too early". Both core and LMC midwives were adamant that unnecessary interventions such as artificial rupture of membranes (ARM) and augmentation with oxytocin infusion occurred when women were admitted too early (ie before labour is well established). Sarah felt that "the clock starts ticking the minute you walk in the door" (Sarah, core midwife). "Once they're in the hospital, even if they're just having morphine, they're becoming, you know, used to being in that environment, those expectations come, that they're going to work out my pain..." (Margie, core midwife). Margie described her feeling of discomfort as a core midwife 'minding' women in early labour and using morphine... she worried that because of the busy-ness of the unit these women are often "... just left, you know, put in a room, you hope she's going to get some rest, but... with nobody particularly caring for her" (Margie, core midwife).

Lydia felt that many women think that once they see the doctor, "something is going to happen... that maybe, you know, the doctor's going to break my waters or something" (Lydia, doctor) and that's why she chooses not to come into the woman's room unless a midwife has consulted with her about a long latent phase. Anna was convinced of a clear link between early admission and intervention, saying "...if they get stuck here overnight at one centimetre needing pain relief, they're probably gonna have an augmentation, epidural in the morning...and then spend the whole day lying like this"

(indicating a rigid stretched out position) (*Anna, doctor*). She suggested that the “way medicine works now” is that women have choice and she doesn’t believe it is reasonable as the doctor to say “no, you can’t have something” (*Anna, doctor*).

Getting nowhere – the decision to augment

All nine of the women interviewed had experienced labours they considered ‘long’. Although labour length was not initially mentioned on the Participant Information Sheet, the midwives who disseminated information about the study were appraised of the inclusion criteria which suggested a labour length over 12 hours. I deliberately avoided defining ‘labour’ or ‘long labour’ in order that women would have the opportunity to self-define this parameter, which may or may not have included the period of ‘latent’ labour they experienced.

Four of these women experienced labour augmentation with an oxytocin infusion, due to a diagnosed delay in labour. Many of the women’s stories revealed a definite impact on the nature of their contractions from the move to hospital from home, even when labour was already adjudged to be ‘established’. For Kimberly, “The adrenaline of going to the hospital slowed it all down” and Nicole, whose contractions began at 3am following an SRM, and who was 7cm at 7am and 9cm on arrival to the hospital at 9am said “and then things just seemed to stop...yeah, just stopped. Well, I was still having contractions but they weren’t progressing anymore, they weren’t getting any worse, I wasn’t dilating anymore, and they started backing off, the contractions were slowing down” (*Nicole*).

For those who were augmented, the decision to commence the oxytocin infusion was less difficult than the choice to have an epidural. The women mostly knew that augmentation might be a possibility in labour, as it had been discussed with them by their midwives during pregnancy. The amount of detail that they recalled from their antenatal discussions is well summed up by Steph, who said “my memory could be off here, but I think they said they can give you ... an oxytocin drip...and that’s an artificial version of what you’ve got already and it can speed things up...” (*Steph*).

They understood that it made contractions ‘different’ than normal contractions and that its use usually meant an epidural was also likely. In their minds, the synthetic oxytocin would come first, followed by the epidural, but in fact the opposite occurred in each case except for Nicole. In contrast to the other women, although Kimberly was a paramedic and knew about the use of oxytocin post-birth for controlling bleeding, she

didn't know that it could be used during labour also. But she said it "made sense" (*Kimberly*) that it could be used for stimulating the uterus.

The women whose labours involved augmentation with an oxytocin infusion all described that they were given options around this decision.

The doctor came in and said '...you've taken awhile to like, go into [second stage] labour, and so [midwife] said well, let's talk about what you want to do, you know, if you want some more time'... and I said, 'well, I'd rather wait, I mean, I've done all this work and I don't really want to go through that, I'd rather give it a try, and I have the epidural now and so I think I can do it and I can wait', and so she said, 'yeah, ok, let's wait', but then the doctors were getting more concerned as more time went on (*Diana*).

Bobbie, Diana and Cohen saw the augmentation as a "logical step" once it was clear that their contractions were waning after their epidural was inserted. None felt like this decision in itself was particularly difficult. Bobbie had "seen it heaps of times on One Born Every Minute" and she said she knew that augmentation "goes with the epidural – you know, one slows it down, so you need the other to speed it up" (*Bobbie*) and Diana said

I don't recall it being a difficult decision, it was more like... I knew that I needed to have it but I don't remember exactly the conversation that went with it. It was like, so much and then it was too much, and we were waiting, waiting for so long, but not too long, 'cause you know they don't want him to go into distress... (*Diana*).

Nicole knew that oxytocin infusion could be used as part of an induction process but admitted that she hadn't known that once labour had started, it could "go backwards" (*Nicole*) as hers appeared to do. She said her decision to agree to the oxytocin was easy because it was obvious that something was needed when their non-pharmacological attempts to stimulate labour were not working;

Our initial options were to try and just move things by keeping moving...I tried positioning, I tried kneeling, I tried shifting position, standing up and then walking around...

but when nothing changed my midwife suggested oxytocin. I was really keen for it because I was tired.
(*Nicole*)

Decision-making during labour- multiple perspectives.

Further exploration of the women's ideas about decision-making regarding augmentation in labour revealed that they each felt it was important to know a bit about it in advance. Each of them described that they *expected* to be involved in decision-making, and that this was very important to them. The women were all used to shared decision-making; it was a feature of their pregnancy relationships with their LMCs which they had enjoyed and found, in some cases, to be a new way of working with a health professional. So for Diana to have an anaesthetist come in to consent her for her caesarean section anaesthesia when she didn't yet know that a caesarean section was in store for her, was a disconcerting event.

Diana: ...one came in and said to [midwife] so, is there going to be c-section in here today, 'cause we're trying to schedule which one to do when...

Suzanne: how did that make you feel?

Diana: um, well, [midwife] was pissed that they would come in and say that, that somebody came and said that right in front of me... and she was like, 'no, there's no c-section here', like, thank you very much, and was kind of like ...rude to him, and... 'cause she was like, thanks, now you've put that in her head...

Suzanne: and how did you receive it?

Diana: well, I was kind of like, ok, I get it that that's maybe what they need to do, but I did think it was a bit unprofessional to come in and say that (*Diana*).

She said that she and her midwife had spoken about caesarean section as a possibility earlier in the labour, and the registrar had mentioned it too, as a possibility, but that no decisions had been made. It seems a decision was made in the office and written on The Board. The anaesthetist saw that Diana was 'for CS' and had made an assumption that she was awaiting his visit. She felt "really pressured" (*Diana*) to make a decision at

that point, because she was told if she waited any longer, there would be no staff available to do the surgery.

These women appreciated the way that their midwives gave them information but didn't steer their choices. "She never told me what to do, just gave me the pros and cons and left me to it." (*Steph*). Kimberly told me about how her midwife did "lots of storytelling about other women's experiences, you know, what worked and what didn't" as a way to "subtly guide my thinking about things but didn't tell me what she thought" (*Kimberly*). This was quite 'freeing' for the women, and it encouraged them to take responsibility for themselves, and to ask questions. Making decisions in labour was made trickier in the presence of pain, but the women said either their support people or midwife reminded them about their antenatal plans and that this was helpful.

The midwives, both in their individual interviews and the focus groups, discussed how they tried to pre-empt decisions they anticipated on the horizon, mostly around pain relief choice and augmentation, and worked with women slowly and gently to sow a seed, and then 'drip feed' information, so that it didn't feel too overwhelming hearing everything at once. They made sure there was time for questions before expecting a decision and provided privacy for discussion with family and support people by leaving the birth room for a while. There was a suggestion that at times a woman's choice might be subverted by stealth, but that maybe women are 'onto it' when this is happening...

...and I tell women antenatally, if everything's going well, and they're progressing and they're asking for an epidural, I am going to go as slow as I possibly can (*laughter*) and they laugh at me at the time, and I've had women in that situation going 'I know what you're doing!...' (*lots of laughter*) and so it becomes a bit of a joke, you know, ...you can do this, you've got this! (*Willa, LMC, FG 2*).

Generally the women felt that the decision-making was theirs, although Cohen described a situation where she thought the decision about having a caesarean section was made for her by the doctor, but she was glad for this to happen in this way,

Cohen: I just didn't want it.. but he was really good... he said 'I'm making this decision for you, I mean, if you really, really wanted I could try again with the ventouse or I could try forceps,

but I am quite sure we'd end up with a c-section anyway' so, um, so I had the c-section

Suzanne: so you felt like you had options at that point?

Cohen: yeah, I mean, all along... all along I felt like we had options, we asked questions, I mean they were really good actually, I was really impressed with the care, especially in labour and delivery, um, so yeah I felt like I had options but when he said, when he basically said 'I can, I am hap...' – I think he phrased it as 'I am happy to make this decision for you' I was actually,.. I thought that was a really good way to say it actually... I was glad... I mean, I think I was crying quite a lot at the time, and I didn't want to have a c-section at all, but, I was glad that he was telling me that I needed it, rather than kind of giving me a difficult decision to make when I was upset and tired (*Cohen*).

The doctors generally agreed that informed decision-making was important, but both at interview and in the focus group, expressed sentiments suggestive that offering informed choice in labour was a bit 'problematic'

I just think it's such a difficult thing for them to make a decision themselves at that point in labour. I would like to think that women feel like they have a choice, and that they're informed, but I'm sure not all of them feel that way, cause it is a really difficult time, and especially if they're in pain, and you're trying to ... get things out between contractions, and you pause, and then you try and do a little bit more.. (*both laugh*) then another one comes...you, know that can be quite hard, I think (*Lydia*).

Anna felt that it would be helpful if women had particular concerns, say a desire to avoid instrumental birth, that they attended a clinic during the antenatal period to discuss these concerns;

...they know about choices and they say, 'well I'm not having a forceps', and you go 'well, there's a bradycardia, it's a bit hard to discuss the pros and cons of that now', you know, I would have liked to know that before (*Anna*)

and during the focus group discussion, Dr L intimated that the idea of informed choice during labour is 'loose'

...because if they've been informed about ventouse and all that, and then we're getting informed consent, which is a very loose term in labour, but you know if they're introduced to those concepts before... it should be prefaced with... that no-one's going to be making any decisions without them, but they're not going to be just going on and on... (Dr L, FG)

...leaving the door open for 'making decisions without them' to happen.

A short reflection from my journal highlights the complexity of decision-making in a deteriorating clinical situation. Two registrars were discussing how to encourage women to make the "right" choice in a serious situation (NB the underlining was mine)

...

Then they got onto how to impress upon a non-consenting woman the seriousness of a situation. One reg said 'you have to tell them their baby might die, in order for them to understand that you mean it that you are really worried. Or tell them that their baby might be brain-damaged if you don't act right now'. They were discussing a case of an awful trace [CTG], a decision for CS, the woman wanted to wait for her husband to come before she gave her consent. The reg said 'I said to her, well, if we don't go now he may not have a baby to say hi to'.

We need some new language for communicating the seriousness of the situation that is less coercive (*reflective journal 20.04.18*)

Recognising progress in labour

In order that delay in labour or obstructed labour can be recognised, clinicians need to be skilled at determining whether progress in labour is occurring. 'Normal progress' in labour has been the subject of intense research interest and a critique of the literature on this topic has been provided previously in this thesis.

During my interviews and focus groups with clinicians I was curious to understand how they recognise and measure labour progress, as well as how they *came to* their

knowledge about normal progress for first birth. As a midwife with many years of practice, I know that my own experience of working with labouring women does not reflect the formal learning I have undertaken in this area, and until very recently, neither has it been reflected in the evidence base available from empirical research. I asked my participants whether they had experience of being continuously present with a woman from very early labour right through until the completion of placental birth. All the midwives I spoke with had had this experience many times and spoke of learning to appreciate the nuance and subtlety of labour 'tipping points', from latent to active to transition to birthing. "Being with women" was the most commonly articulated mechanism for learning about normal labour progress, but midwives acknowledged other ways of knowing as well; Sam suggested "...reading, women's stories, attending midwife workshops" and Margie said "it's just experience". For Gabrielle it was "a huge amount of reading... lots and lots of reading about women's birth stories" and Louise described "sharing stories of practice" with other midwives as being pivotal for her learning.

The doctors too had an appreciation that there was more to it than book learning, although unless they had personal experience of having given birth, or being a partner of someone who had, they had typically not spent an entire labour continuously observing a woman's progress. In the doctor's group discussion, coming to know about labour progress was described by some participants in the following exchange

Suzanne: So, I'm also interested also in how you have learned what normal progress is for women giving birth for the first time, how have you come to that knowledge?

Amanda: medical education...

Riley: yeah, I think that most of it has been...on the job kind of learning... and that's probably quite different for everyone... I have only ever worked in this hospital so all of my knowledge about that probably comes from the senior midwives and other clinicians here

Amanda: yeah, but definitely also from medical school, through the diploma as well

Ramon: yeah, we learned that through the diploma

Amanda: yeah, to base the on the job experience on (*several nodding agreement*)

Suzanne: ok...so you're learning experientially, as well as...kind of, bookwork? Would that be fair to say (*several nod yes*)

Fionne: well, yeah, but it depends where you're trained, like, in Ireland where it's very much about active management... you know, partograms... I think after a while you realise there's more subtleties to it, more than just that, so it doesn't necessarily just stick to that... (*exchange from doctors focus group*)

Several midwives expressed frustration with my use of the term 'normal progress' in labour. Jenny said "...it's just different for every woman" and Liz described how she talks about it with women

'you might have your first run of contractions on Friday, and you might expect to have your baby in your arms by Monday...'
which I quite like talking to women about, cause it's giving them the sense that it's really...like it's a marathon, not like, 'you can expect the average length of labour to be twelve hours...'
because I don't think that is very helpful (*all murmuring agreement*) and really encouraging them to, during the early stages of labour, to really preserve themselves (*Liz, LMC, FG 1*)

Sarah was more adamant:

Sarah: What is normal? I *hate* the word normal. It really... gets on my goat (*both laugh*). I hate normal birth. I don't think that birth is normal.

Suzanne: can you explain that a wee bit more?

Sarah: yeah, I think that it's a huge transformational event, and one person's journey is never the same as another's. You know, it might be normal for you ... Normal to me means that it's repetitive and routine, something that you expect the same outcome every time, and I don't think birth is like that (*Sarah, core midwife*).

With respect to how clinicians recognised labour progress, a broad array of parameters was presented. This array was reflective of the clinicians' level of exposure to being with women *throughout* labour. The doctors conceded that they fairly infrequently saw women in early labour, particularly the well first time mothers who are being cared for by LMC midwives and who typically only come to their attention if delay in labour is suspected or spontaneous (prolonged) rupture of membranes has occurred. The doctors relied on their midwifery colleagues to determine whether labour was 'established' or not and said that they trusted the midwives' assessments. Amanda described 'progress parameters' as being about cervical dilatation and effacement, length strength and frequency of contractions, and station of the baby's head but said "I don't know if you can really talk about progress of labour until *I have decided* [my italics] if she is really in active labour" and the others nodded their agreement. This statement belies a sentiment that the woman's labour only becomes 'real' once someone other than the woman has determined it to be so. Further, it undermines the previous comments about trusting the midwifery assessment of established labour, which in itself again reinforces the suggestion that *someone other than the woman* diagnoses labour.

Rowan suggested "how [the woman] is coping with her labour" might indicate progress but thought that this was "a very vague and general statement". She went on to say "so yeah, if she's coping less and less, and starting to require, or request analgesia, then potentially that can be a sign that she's progressing as well... that's a bit subjective... but if she's asking for help that's a real sign of progress" (*Rowan*). Amanda chipped in "well, if you're getting further down the labour track, you know especially around the transitional stage, women tend to be more...losing it a little bit more (*to general nodding and agreement and laughter*) you know, tending to be perhaps a little more out-of-it at that point" (*Amanda*). Whether or not the woman could still talk through her contractions was added by Riley, but he added that he also thought this was subjective. The tone that accompanied the use of the language around 'being subjective' was interesting, as it suggested that these speakers were implying that this assessment was somehow less robust than their more 'objective' measures of progress. I later reflected in my journal about the total absence of the use of such descriptors as 'subjective' or 'objective' among the midwifery participants. The doctors described a progression towards women being more 'out of it', or 'losing it', but the language midwives ascribed to this same state of being in labour was about being 'in it' as in 'in the zone' and 'finding it' as with 'finding their rhythm' and

'finding what works' for them. Dichotomous language to describe the same phenomena is fascinating.

The midwives also described the observation of cervical changes, contractions changing and alterations in the woman's demeanour as aspects of their recognition of labour progress. Always included were statements reflecting that women's labour experiences are unique to them, and that while patterns can be observed across a midwife's experiences of working with many women, each labour journey is individual and should be respected as such. Such a wealth of other 'ways of knowing' that women were progressing in labour was offered by the midwives that here they are grouped and presented as a list, rather than as individual quotes for pragmatic purposes:

- * As the midwife you are watching a journey inward, as women go from being highly interactive to going deeper and deeper
- * Introspection, withdrawal
- * The sound of her voice – changing vocalisation – increasingly sounding similar to 'the sounds of sex' if in a protected environment, decreasing inhibition
- * Her 'presence' – here with us or internal to herself - focussed on her work
- * Less chatty, increasing strength in their squeezing hands, increased colour in face, flushed facial oxytocin receptors
- * Her movement – swaying, bouncing, kneading her feet, curling her toes, up on tiptoes, becoming anchored in one spot, then restless, then can't get comfortable as a progression of bodily movements frequently observed
- * Midwives' awareness of tiredness in their own bodies when they have provided intense physical support for the woman's changing needs
- * Changing position of the baby as it rotates and descends – seen visually as well as by palpation
- * The 'purple line', Rhombus of Michaelis, bloody show, membrane rupture, anal dilatation, smell of impending birth, flatulence – visual/aural/olfactory cues
- * The coolness of the woman legs – observation that coolness in the legs rises with increasing dilatation

* Needing increasing amounts of support, but not necessarily pharmacological support

Supporting women through early labour

The midwives described the ways in which they supported women throughout labour, especially focussing on early labour and the importance of “keeping them out of hospital as long as possible”. This was seen as a crucial strategy to prevent intervention and promote the possibility of a “successful birth “(*Cassey, LMC, FG 1*)

Sam was enthusiastic about cycles of activity, relaxation and rest during early labour;

So, you talk to the woman about going round this cycle ... they jump onto the cycle wherever their energy level is at that particular time ... the first part is, say it's in an activity phase, we talk about walking in nature, trying to do hills, trying to do steps, um, spiralling hips, belly-dancing and, using the swiss ball, being intimate with their partner and building oxytocin through intimacy. And so, talking about the oxytocin process – so the value of kissing and cuddling, sex, the whole deal, and then um, also nipple stimulation, so alternating sides, fifteen minutes per side, for an hour. So those are most of the activity cycle things, and then if energy is starting to wane, doing something that's relaxing ...having a bath... a shower, relaxation techniques, massage, hypnobirthing, calmbirthing scripts, anything that puts them into a relaxing state of mind. And then that goes into rest, and that would be...in a well-supported left-lateral position with lots of pillow and cushion supports, and heat packs, and maybe a TENS machine as well (*Sam, core midwife*).

Using water was another favourite strategy and Margie (*core midwife*) thought that this, accompanied by mobilisation and heat packs was preferable to what she mostly encounters in her core role, the use of morphine. She speculated about changes she has noticed over time in her practice

In terms of my experience, actually I don't see that many women who want to try no pain relief at all anymore... it's a new trait... I think it's a problem with the tertiary unit... it's that

you've got anaesthetics on-site, they can just come and 'sell' their epidural (*Margie, core midwife*).

Trying to ensure that women felt safe was Sarah's strategy for the women who came to hospital in early labour. She described an "element of fear related to the unknown" and felt that addressing this by creating a relaxing environment with dimmed lights and a calm ambience was key to enabling women to settle in. She said

... if you're in labour you've gone into that primal... you know your brain is more focussed on stuff... you've gone into that zone, so things are coming in, you're not really discriminating, you're not going 'oh, that's a lovely curtain', all good, you're going 'oh, that smell is gross' or 'that noise is really loud' (*Sarah, core midwife*).

In the focus groups, a number of ways of working with women were canvassed which included those previously mentioned, and others such as teaching support people massage, acupuncture and rebozo techniques. Nutrition and hydration were priorities for Cassey along with touch and rest in the form of 'microsnoozes' between contractions. Recognising the impact that support people's own experiences can have on how they support their loved one and so working with women's mothers and partners antenatally to strengthen their belief in the physiological process of birth was seen as an important contributor to women's wellbeing.

Suzanne: it sounds as if you were saying that if the mother or the family believe in birth, then that makes it easier for the woman

Delilah: yeah, that's it

Gia: yeah, the partners in particular (*all nodding in agreement*) if everything's nice and calm, and everyone has that faith and that belief it makes a huge difference to the woman in labour...

Delilah: its quite amazing...the partners and mothers...

Gia: ...and the midwife as well, if everyone has a true belief in that physiology of birth and the body being able to labour and having that strong belief and that faith in women, that they can do it, because...they can! (*excerpt from midwives' focus group two*)

As a doctor, Lydia's strategy to support women through a prolonged latent phase of labour was focussed on making sure the basics were covered, nutrition, good hydration and on ensuring rest, which might involve the use of pharmacological supports such as sleeping medications or morphine. She would offer induction of labour if the woman had been in the latent phase for a long time. Anna was reluctant to intervene in a latent labour, but said

You know, often they've been up a long time, and they're in pain, and they're begging you, and I do think some women are completely unprepared for what it's actually like...then there's what the media portrays, what the movies portray, and I just don't think they understand...and then you get the family going 'she's in pain, this is wrong' and then there's the woman going 'oh, something must be wrong, I do need something' and I'm going 'actually, this is really normal...' (*Anna, doctor*).

Summary

The data presented in this chapter confirms that augmentation procedures are used permissively and that there are adverse outcomes associated with them for both women and babies. The data also paint a picture of how labouring women and clinicians negotiate the onset and progression of labour in terms of both accessing and engaging with the hospital setting and in providing a glimpse into the influences on their decision-making processes. These women were capable of recognising labour onset and making their needs known with respect to coming to the hospital, although this transfer from home to hospital could be challenging due to practicalities (the car ride) and nuance ('passing a test' to gain entry). Once there, the requirement to convince others of the need to stay posed difficulty for some and was sometimes determined by forces outside the control of the woman, such as how busy the unit was at that time. Coming to hospital "too early" was seen as problematic by clinicians, for practical reasons to do with the occupation of space, and also because of the risk early arrival poses in terms of the increased use of medical intervention. Clinician's assessments about 'adequate' labour progress are informed by both empirical and experiential knowledge, and successful strategies for supporting women during labour were outlined.

These data from the chart review, audit, and the talk and text from the women, midwives and doctors represent an *empirical* understanding of how first birth unfolded

for these few women, and also for a larger sample of similar women. It represents the 'seen'. Clinicians discussed how they navigate and understand progress during first labour. This provides some foothold for answering initial research sub-questions that asked about the outcomes associated with first labour in this tertiary maternity environment, and what women's and clinicians' understandings were about first labour progress and support. These findings are resonant with those found in similar studies in other jurisdictions. While many congruent findings exist between the present study and extant literature, divergent findings that relate to Aotearoa New Zealand's midwifery-led, continuity of care model revealed some differences. This discovery was made by using abduction as an analytic tool – identifying an unexpected finding and considering what its significance might be. A discrepancy was found between hospital-based clinician's impressions that first-time mothers are unprepared for birth, and women's own descriptions of their labour expectations. The women were assertive about their involvement in decision-making and valued being provided with options and making their own decisions. Relationships between the women and their LMCs were crucial to considered decision-making. This has important implications.

The 'system' in Aotearoa New Zealand is an optimal set-up in terms of well women having the freedom to choose where and with whom they will give birth. They are supported by LMCs who assist their efforts during pregnancy to be well-prepared. These LMCs deeply understand the breadth of variation in normal labour progress, how to support women through labour, and provide continuity of care. So why is it that when this 'little team' comes to the tertiary hospital, (as was demonstrated by the quantitative findings), so few normal births will result? Drilling down through our layered understanding about reality, the following data chapter illuminates how the events and happenings occurring within the woman's birthspace shape her experience at the *actual* level. Both seen and unseen influences - what is seen, heard and felt within the tertiary maternity culture are brought to bear on her and those caring for her. Surfacing these influences can nudge us toward a better understanding of why this optimal set-up does not consistently enable physiological birth to unfold at its own pace, in this place.

Chapter Seven

What wraps around women giving birth: what can be known but may be 'unseen'

Introduction

Chapter Six presented the experiences of women and clinicians in relation to the onset and progression of first labour. This was set against the backdrop of quantitative findings which had concluded that labour augmentation procedures were frequently applied in this setting without documented sufficient justification. The purpose of this chapter is to identify the '*actual*' level data – the events and effects (known but not necessarily seen) that shape women's experience in this study setting. The findings described here coalesce around two main concepts, the environmental and relational contexts surrounding the birthing woman. This chapter covers 'environmental awareness' of women and midwives – how the setting enables or constrains women's ability to 'be' in this place, and how the environment shapes practice. Temporal pressure, busy-ness, world views, problematisation, seeing normal last, surveillance and control are all features of this environment. This chapter addresses the research sub-question about how the environment shapes the experiences that were manifested as the previous chapter's outcomes, drawing on data from the interviews, focus groups and non-participant observation. It helps us come closer to understanding "what is going on here". The chapter conclusion summarises that trying to enact a 'belief in physiology' ethos within a 'belief in technology' context is challenging.

The environment for birth

The environment for birth strongly influences the 'ways of being' of all those who interact within it. Labouring women, their families, support people, midwives and doctors are all affected by the ambience of not only the birthroom but the space that surrounds it. Within this space, the physical set-up, sense stimuli, relationship dynamics and physicality of birth itself collide to create a supportive or unsupportive 'feel' which ebbs and flows according to who and what is in the space at the time. All these things contribute to the birth setting culture – what is seen, heard, and felt (Catling, et al., 2017) by those within the space. The previous chapter highlighted how although ostensibly the midwifery model of care should maximise the possibilities for

undisturbed normal birth for well women giving birth for the first time, in fact relatively few of these women achieved this outcome when the tertiary maternity setting was their chosen birthplace. The culture of the study site shapes the experience of women and midwives who are striving to achieve physiological birth within a risk averse and pressured context, and where hierarchies of power and control still exist despite documented vision and mission statements that centre women as the drivers of care. What is described in the coming pages are the 'seen and unseen things' that have a role to play in how the birth trajectories of women are enabled (or not) to unfold.

Environmental contexts – the place

Women's awareness of the environmental influences

Women's occupation of the physical space in the Birthing Suite is determined by the current situation at her time of arrival. The room she is allocated depends on which rooms are currently empty, the acuity of the other women present in Birthing Suite, her desire to utilise the space known as the 'normal birth room' and her LMC's willingness to support her in that space. The woman is seldom an active participant in the decision about where she labours once she is within the institution and can feel 'at the mercy' of what goes on around her. Bobbie understood that she wasn't in the 'right room'

At first, they told me they don't like doing epidurals in the room I was in because its meant to be all natural and like, not the right equipment and all that kind of thing, but because there were no other rooms available they were like, oh, well, we've got to do it here (*Bobbie*).

In fact, Bobbie's decision to have an epidural was directly related to the impact of the environment around her:

...all I remember is walking into the room, and then not too long after my mum went to the bathroom and noticed that there was no soap, so she went and told that there was no soap, and straight after someone...must have been the cleaning lady, just...barged in, pretty much yelling...and I was having a contraction, and couldn't really talk or anything, I just remember breaking down, crying in the bathroom because of the drilling, ... there was construction going on downstairs... but then, like, also just with the pain, but you know, ...well, I needed peace and quiet... I didn't need people talking through all that...yeah, I

just wanted everyone to shut up. I remember asking for the epidural then when I was in the pool (*Bobbie*).

Mary remembered feeling quite overwhelmed when she moved from home and found herself in the room “down the end of the hall with all the fancy equipment” (*Mary*) where she felt “all of a sudden ... outside of my comfort zone” (*Mary*) and went on to explain how she

... had moved into a little bit of panic because I didn't know where to go ... I don't know where to sit, I didn't know how to *be* in this space... I wish I had got into the hospital room, and had taken my bouncy ball, my things and my safety net with me to then use that, and then slowly progress to...to get in my comfort zone... to use the shower and then the gas and air...introduce things really slowly rather than being thrown into a random room and then attempting to figure out what I was doing and what I might like (*Mary*).

For Mary it wasn't so much the presence of people and noise that disconcerted her when she arrived, it was the *plethora* of options available in the new environment when she had been comfortable at home with the *few* things that she had already established were helping her to manage her labour.

The rooms in the Birthing Suite have been designed to reduce the audible noise coming from each birthing room, and none of the women described hearing other women in labour apart from Mary who related the sound of hearing another woman giving birth to her own feelings of disappointment that she did not achieve a normal birth

It was nice and calm in the room, and the midwife had walked out the door, so the door had flung open, and I could hear a woman screaming in another room, and I found myself going 'ooh, you go girl!' you know ... and I turned to [midwife] and said 'I wonder where she is at? Wow, I must have pissed a lot of people off with my noises' and she said 'that sounds like a push, I think she's pushing' and there was a part of me that was envious, it was only like a little flicker, and then [midwife] went out and she came back in and said 'ah, she's just had a little girl' so she was pushing and there was this part of me that went

'oh, I didn't get that' and even though it was a sound of agony, there was a part of me that was like 'that could have been me, I was almost there' and maybe that's something... you know, I want that (*Mary*).

The general busy-ness of the Birthing Suite was noted by some of the women to have affected the care they received. JC described sensing that the ward was busy when the core midwife she spoke to suggested she should stay home longer in early labour because there were no rooms available anyway. Mary's epidural took three and a half hours to be sited "because the anaesthetist was busy somewhere else" (*Mary*) and Diana was aware that the availability of staff was influencing decisions about her ongoing care

... then there was also this issue about, like, whether one of the doctors was going to be available to do the c-section, that was also something that was also kind of looming. So they needed to know was this happening or not happening... they needed to have a decision because they had other women... (*Diana*).

Maria's sister who had joined in at the end of my interview with Maria had reflected upon how the time of day probably affected decisions that were made about Maria's care, relating it to a similar experience she had had herself, where the lack of continuity of medical staff after a shift changeover prompted a change of clinical management

It was just like when I had my second one, it was just the same...they switched shifts...the previous doctor was going to let me keep going and the new doctor just came in and said no, so [Maria] was in a similar situation (*Maria's sister*).

The theatre environment was described as overwhelming by those who experienced a caesarean section or were taken there for an assisted birth. Bobbie was shocked to find "fifteen to twenty people in the room", and Cohen said that even though she felt overwhelmed by all the people,

...they were all quite light-hearted as well... so everyone in theatre was joking with each other, well, I mean, getting down to business, but being light-hearted about it, which was nice. The anaesthesiologist was extremely supportive as well, she was great

Suzanne: so it still felt like a joyous experience for you?

Cohen: um, ah, I don't know if I would go that far (*laughs*) ...it was joyous , well, the joy came when I saw my husband with her, he had such a smile on his face, he was just so happy...and that really changed how I felt, but I wouldn't say, ... no, I wasn't very happy to be in theatre, otherwise.

Nicole also found the theatre staff "lovely" although

... there *were* quite a few, maybe about five and then also my midwife and the student, so maybe seven, I seem to recall there were two nurses, or maybe four, the anaesthetist, the surgeon, I vaguely remember there being another woman but I don't know who she was, I just remember there being someone else around my head... (*Nicole*).

Although some of these low risk women who anticipated normal births found themselves in situations where "everything we didn't want happened" (*Diana*) and for some the environmental conditions contributed to their experience negatively, for the most part the respectful communication they encountered and the involvement they shared in the decision-making about their care mitigated against their overall perception of their birth experience. Bobbie (who you will recall, is a teenager) stood out from the others in that her description of her encounter with the medical staff was recounted as being less respectful, and the language she used to describe her interactions indicated that she had found her forceps birth abusive and disempowering

As Bobbie talked with me, she said repeatedly 'I just wanted to close my legs... I was tensing up, and trying hard to relax and to not move, because I was trying to move up the bed away from it... all I wanted to do was just shut my legs...I was lying on my back with my legs up the whole time'. She said 'It felt like they were trying to shove their finger up my butt-hole, so I kept yelling 'take your finger out of my butt-hole' (*notes from reflective journal*).

With this exception the women accepted that the interventions they experienced during their labours were necessary even if they were unanticipated, and they felt that

they had engaged in shared decision-making with their caregivers and had their wishes respected.

Midwives' perceptions of environmental influences on women's birth experiences

In often stark contrast to the women's perceptions, the midwives in this study shared some strong opinions about how the environment the women are expected to give birth in impacts negatively on women's experiences. Their insights coalesced around five central concepts. These were time pressure and concomitant pressure for labour progress, the effects of the physical environment, differing world views and the problematisation of normality, the effects of being under surveillance, and the pervasive ambience of risk aversion coupled with a fundamental lack of belief from some clinicians about women's ability to give birth without medical assistance. The upshot of being in a space where all these factors collide is that midwives feel they bear the brunt of both women's and doctors' dissatisfaction, that they are readily "thrown under the bus" by their medical colleagues and that being under this constant pressure leads to defensive practice and erosion of their professional autonomy.

The metaphor of a pressure cooker suggested itself very early on during the period of observation in Birthing Suite. There was a prevailing sense of ever-increasing demand within a constrained and contained place – the lid screwed down tight (no more staff, more and more women, increasing complexity, less money). Yet somehow, although the ambience was often fraught and there was a definite feel of impending emergency and 'poised-ness' for action, the individual staff moved with grace and certainty that they could "manage whatever came through the door" (*field notes*). An air of quiet resignation persisted at the daily handovers during Code Red periods, which were plentiful during my stay, with creative solutions to 'where to put people' offered hopefully. It put me in mind of Mandie Scamell's (2011) characterisation of midwives as swans: "Us midwives: we're like swans swimming across a lake. On the top we look all serene and tranquil but under the water our little feet are flapping about like mad" (p. 987). From my field notes:

The MSC [midwifery shift coordinator] is still smiling, despite every room being full, NICU is full, PN is full, and someone just rang to say she's bringing in someone in labour. There's some mildly hysterical laughter (*field notes*),

and my reflective journal records:

The MSC was getting quite frustrated this morning as one by one people came into the office, looked at The Board and groaned. She ended up saying 'stop the negativity, we can do this, we're a team' then set about reorganising and prioritising and creating space where there seemed to be none. I am struck by how frequently the shit hits the fan at handover time – is this clinically driven or do some decisions get made either by deciding to leave things to the next shift or trying to get things done before handover? (*notes from reflective journal*)

I witnessed examples of most midwives and some doctors working hard to protect women's experiences, by remaining mindful of the effect a decision to intervene (or not) might have on the woman's emotional well-being. Most of the time. But there were some notable exceptions and I found myself on some occasions feeling angry or frustrated about how some women – and staff - were spoken about, how information was deliberately withheld from women and their families, how the ethos of 'no decision about me, without me' was blatantly disregarded. I heard a consultant say of a "non-compliant" woman "well, we don't care about her, we just want to keep the little one safe" (*from field notes*).

The two interviewed doctors did not consider that the busy-ness of the Birthing Suite made any difference to their clinical decision-making:

Suzanne: do you sometimes feel there's a pressure to get people through, or pressure from the consultants or...

Anna: I don't think so, well, not in terms of the well primip (*Anna, doctor*)

but one SMO was more circumspect, "... that's the thing about all tertiary hospitals. We all intervene unnecessarily because there are so many pressures, you have to get people through, it's just too busy, of course we do things unnecessarily...' (*from field notes*).

In their focus group the doctors were discussing the women who are in early or latent labour, who probably don't need to be in hospital yet and how this is managed when Birthing Suite is really busy...

Suzanne: so as a practitioner, does that influence your decision-making around it?

Lydia: not at all, I have had people sitting around for days...in and out for days, so no it doesn't

Riley: yeah, people come and go

Amanda: nah, I don't think it makes us act on them, it just makes me think why aren't they going home?

Riley: yeah, I guess if it was done somewhere else, then yeah, the Birthing Suite team wouldn't even be aware of those patients (*excerpt from doctors focus group*).

Their discussion became animated following this exchange as they talked through the possibilities associated with assessing these women in another area – keeping them out of Birthing Suite, and this was a strong theme from midwifery discussions about early labour care as well. In my informal conversations with midwives during the observation period, there was a strong consensus that Birthing Suite should be reserved for women who are actually in labour, with other assessments and early labour care being 'housed' somewhere else. But both the midwives and doctors acknowledged that this would pose some challenges for staffing in an already stretched environment and they felt the initiative would not be supported by the management for this reason.

The midwives frequently expressed their dissatisfaction about Birthing Suite being "full of people who shouldn't be here" (*from field notes*) and many told me that "Birthing Suite should be reserved for women in labour only" (*from field notes*).

More disgruntlement today about the A[ccident] and E[mergency] sending up every woman who is pregnant. Sometimes without even establishing if they are pregnant! Last week they sent up a woman who said she was 25/40 with twins. Turns out she actually had bipolar disorder and believed herself to be pregnant with twins. Also today a woman with gastroenteritis – the 'last person you want in a Birthing Suite' (*notes from reflective journal, including quote from core midwife*).

Even the 'normal birth room' was often occupied by women who were not in labour. For example a woman who had a chest infection occupied this room for four days because there was a desire to isolate her from the other pregnant women in case her diagnosis

was influenza. Because her condition was medical rather than obstetric, she arguably could have been cared for in another part of the hospital.

What I came to appreciate during my observations was that although the doctors generally insisted that they did not let the busy-ness of Birthing Suite influence their decision-making, what they said, and what they did, appeared to be at odds. My field notes record “They’re ARMing or not based on a full Board – so although they say that the busy-ness of the unit doesn’t affect their practice, it absolutely does” (*field notes*).

Midwives in both the interviews and focus groups shared some strident views about how the Birthing Suite environment affected women in labour and the practice of clinicians.

Sarah: the cycle of intervention happens, just because they’ve walked through the doors. The minute you walk through the doors the clock starts ticking, you’ve got paperwork to consider, you’ve become part of the system, you become a cog in a big fat wheel. You’re looked at now, and not in a holistic way, you’re looked at...

Suzanne: so do you think the being *looked at* is an issue? Once people are here, they’re...

Sarah: Absolutely, the minute you walk through the door, you’re a name on a board, you’re in somebody’s head, and, generally, you’re a name on that board and someone wants to get your name off that board, as quick as possible... because you’ve got pressure on resources, so you’ve only got a certain number of beds, so you’re not going to say ‘that’s great, you can stay here, in latent labour for the next day and a half, with your friends and whānau’... we’ve got people who need the room, (*laughs*), you know, you just can’t offer that... some days the busyness of the unit massively impacts on your experience, because if you’ve got time, then you’ve got time, but if you’ve got to go off to theatre, and you’ve got a primip in early labour, then yep, you’ll be giving her some pain relief, ‘cause then she’s not going to ring the bell (*Sarah, core midwife*).

Time pressure

Time pressure was strong theme through the core midwives' talk about how the tertiary environment influenced both medical and midwifery practice. Margie put it like this

It's this real emphasis on moving things forward, there doesn't seem to be a lot of patience, sometimes... it always feels so busy and always feels so rushed... (*Margie, core midwife*).

Sam noted how on a rare quiet day, she would be more inclined to share a cup of coffee with a colleague than engage with clinical matters

Well, when we did have a quieter shift, I didn't want to be looking up frikken guidelines, I wanted to be with my colleagues...we just ran past each other all the time... and have those meal breaks that I never got to have... (*Sam, core midwife*)

indicating the importance she placed on maintaining relationships and self-care within this pressured environment.

Time pressure for labour progress was also noted by the LMC midwives. Gia felt this as "... just that pressure you feel that labour has to meet certain milestones, and it can't just...you know you have to be dilating... you know, that time thing" (*Gia*) and her colleagues continued

Fern: it's stressful

Delilah: yeah, really stressful

Gia: yeah, just that environment

Willa: and their definition of progress

Gia: and how it's so different for everyone, but in there it's like, there's one standard and every woman should fit into this kind of timeframe for progress, but everyone's labour is...

at this point Charlie interjected, and expressed an empathetic view that although she agreed, she could see that the facility also encountered pressure

Charlie: yeah, but you can see where they're coming from, you know they've got a full board, they've got more people coming

in, you cannot take a week over effacing a cervix when they've got a throughput to get on with, you know it's not as if they've got a lot of spare beds, that is their pressure (*excerpt from focus group two*)

This feeling of time pressure was not only associated with spontaneously progressing labours, as Cassey intimates it is also present once an oxytocin infusion has begun

Cassey: I am aware I'm on a timeline and I want to succeed if possible, I don't want to get to the end of 12 hours of synto without making progress...

Suzanne: so that's a thing?...that you've got... kind of 12 hours to have a baby from that point?

Cassey: yes, more or less

Suzanne: and so, does that put some kind of silent pressure on you, do you think?

Cassey: not very silent (*everyone's laughing*) (*excerpt from focus group one*)

Who's on?

Shift changes and 'who's on' in terms of the medical staff of the day was also mentioned by the midwives in relation to practice decision-making. Charlie suggested that Birthing Suite acuity makes a big difference to what happens, as well as "the registrar, whether they're going off, and changing over, and not wanting to get involved in a caesar themselves, they're wanting to leave it to the next one" (*Charlie*) and Sarah noted that

... there's a particular consultant that, you know, if that persons on, then that board will be cleared by 11 o'clock and if you're on a PM shift then you will be in and out of theatre all afternoon because everybody will have labour dystocia that day (*Sarah, core midwife*)

suggesting that practice is sometimes determined by clinician preference to not be called in during the night. "Who's on" was discussed in both the midwifery focus groups as being an environmental determinant of practice decisions, and both groups also saw the midwifery shift coordinator as pivotal too

Willa: Depending on who's on, in terms of the team of the day and the charge midwife

Gia: yeah, it does depend who's on, who's the charge midwife

Fern: it depends on the team, I feel that

Delilah: and also what's happening in there (*excerpt from focus group two*)

Louise noted that "Through the night, things are seen quite differently than during the day" (*Louise, FG 1*), and I recalled that I had written a reflection about one of the midwifery shift coordinators seeing some benefits to being around at night.

She said 'it's a gentler pace and much more midwifery-led'. She said 'the women, if they see a doctor, just get them one at a time at night'. I have observed they often get two or three doctors at a time during the day. I wonder how this feels for the woman - the delegation – does it feel intimidating or more reassuring for the woman? (*note from reflective journal including quote from a core midwife*)

The effect of the physical environment

The physical environment itself loomed large in the midwives' minds in terms of its influence on the likelihood of normal birth in this environment, and they drew clear links between the built environment and its disturbance to the optimal orchestration of labour hormones.

So [*as the woman*] you are in a new space and I can totally understand how that must affect, hormonally, what's going on ... it has to ... we can't help it, its fight/flight, adrenaline kicks in, we're not in a familiar environment, your alarm bells are going... you're not able to just let go... (*Sarah, core midwife*).

Margie said

...the environment, you know it's also, in terms of the amount of medical staff around... everyone rushes in, so it's kind of like, a bit of overkill sometimes...and you know, ... there's just this huge amount of people... and then there's the trolleys...you

know, they're all set up... I just don't think it's a particularly conducive environment (*Margie, core midwife*).

Sam too felt that the room set-up was not conducive to supporting normal birth:

I feel they walk into an environment that's bright lights, big wide corridors, that looks like you should be able to take people on beds in a hurry from one place to another, you know, that's all about function and not about homeliness, and welcomeness and cosiness, and you know, have-a-baby-ness, you know, that feel, and then you go to the room and plonk in the middle of the room is this medical bed that suffices for taking you to the caesarean or doing the instrumental delivery and doesn't look anything like your bed at home, stuff is sitting in the middle of the room, looking like it should be used, and it's all white, it's all sterile or that yucky, neutral colour.... The resuscitaire's down, ready to save your baby, often there's a CTG in the room... (*Sam, core midwife*).

However, Sam also acknowledged that despite Birthing Suite being such an "abnormal environment" it was important to understand that the *feel* of the room could equally be used to *decrease* stress for staff:

...that space affects all of us, so that's why I say make it yours and do the music thing because it will bring down the tone when someone walks into that space. That person might have just come out of an emergency PPH or a resuscitation or whatever and so they're really charged up... so if they walk into a space where the lights are dim, and there's nice music, they're going to... it's going to have an effect on them (*Sam, core midwife*).

This idea that the physical environment also has an impact on the practitioners was echoed by others as well.

Charlie: mentally, I wear a very different hat when I am [at the tertiary hospital]

Suzanne: can you tell me about that...what does the environment...the physical environment, do to you when you are there?

Charlie: well, it puts my heart rate up

Gia: it makes me tense, having to search for things, you know ...I just feel nervous about talking with people

Delilah: yeah, it makes you tense

Fern: and it's like, what books do I need, what do I need to take

Gia: it feels like 'which boxes do I need to tick?' (*excerpt from focus group two*)

For these midwives, the lack of equipment to support normal birth was problematic also. Gia was suspicious that the lack of sonicaid was a "purposeful thing that they've done" and suggested that the staff at the hospital were not happy for you to *not* use a CTG for fetal assessment, even though their policies do not support using a CTG on well women.

Ambience

The midwives believed that the well-being of women and practitioners was also negatively affected by the atmosphere of the environment. The word "fraught" was repeatedly used to describe the ambience. Sam said "the level of adrenaline in all the practitioners, it feels like you're in an emergency department" (*Sam, core midwife*) and my own observations of this were reflected on a particularly strained day towards the end of my stay, when I noted "There is a palpably tense atmosphere today. I have moved from room to room, to try to respect people's privacy, but have ended up leaving, one less person in the fray" (*notes from reflective journal*). This seemed more measured than my reflective entry on day 3: "POISED and ANTICIPATING DISASTER are the words that sum up this place!" (*notes from reflective journal*) and my field notes record on the penultimate day of my observation period

It's very tense. There've been about 18 hours since last Wednesday (i.e. 6 days) that it hasn't been code red. COD [consultant of the day] asks what that means – can she accept transfers etc – this question is not really resolved – the MSC suggests a negotiation at the time if it comes up. MSC has to

give the handover because the reg is in theatre still. She misses a few points – the word “thick” is on the board – she says the woman’s liquor has mec which is thick, when in fact it’s the woman’s cervix that is thick and her liquor is clear. There’s confusion over whether a gynae patient is going to OT or not.

After the handover, the two midwifery managers wait around for the COD to be free to discuss the acuity situation, saying it is untenable. Looks like this conversation will be super interesting, but in the spirit of ethical behaviour I offer to disappear. The COD winks at me and says ‘yes please’. The two midwives were giving me a look that suggested it was fine to stay. I go. I sense the midwives think this would be useful for me to hear (*from field notes*).

Gabrielle tells us during the focus group discussion that “without a doubt” the environment is fraught, and worries that this can lead to potentially unsafe care

You go in... ‘how are things today?’... ‘oh well, it’s a disaster, it’s a disaster”, um, that is classic...*classic* Birthing Suite ‘oh – don’t come out here and tell me anything bad...look how many Caesars we have got to do’ which is really difficult actually, if you need some support, and you have a concern about a labour ...‘we don’t want to hear it’ ... ‘we don’t want to know’ I’ve been told that (*others are nodding*) you know, yeah, awful... (*Gabrielle, LMC, FG1*)

Seeing normal last

The problematisation of women’s pregnancies, regardless of whether their so-called problems were even real was rife. All the women were discussed in the medical handovers according to their ‘problem list’. Things which, in my midwifery world are just things to bear in mind, for the doctors and some of the midwives I encountered these normal aspects of pregnancy - like being beyond 40 weeks, or having a negative blood group, or a well grown baby - became ‘risks’ that required detailed management plans. This made me reflect endlessly about whether in my own practice over the years I have ‘normalised the abnormal’ to the point where I no longer see these things as out of the ordinary, but I know in my midwifery heart that what is actually occurring here is the ‘abnormalisation of normal’ instead. None of these examples are ‘problems’ in a

primary setting, they are just part of a woman's 'being' in pregnancy. At handovers I wondered why these women were even under the purview of the doctors, but quickly realised that these 'problems' (the 'big' baby, the 'postdates pregnancy') are the indications for inductions of labour.

As a feature of the classic expression of this tendency to 'see normal last' a poster hanging in the midwifery workroom said it all (Figure 5):

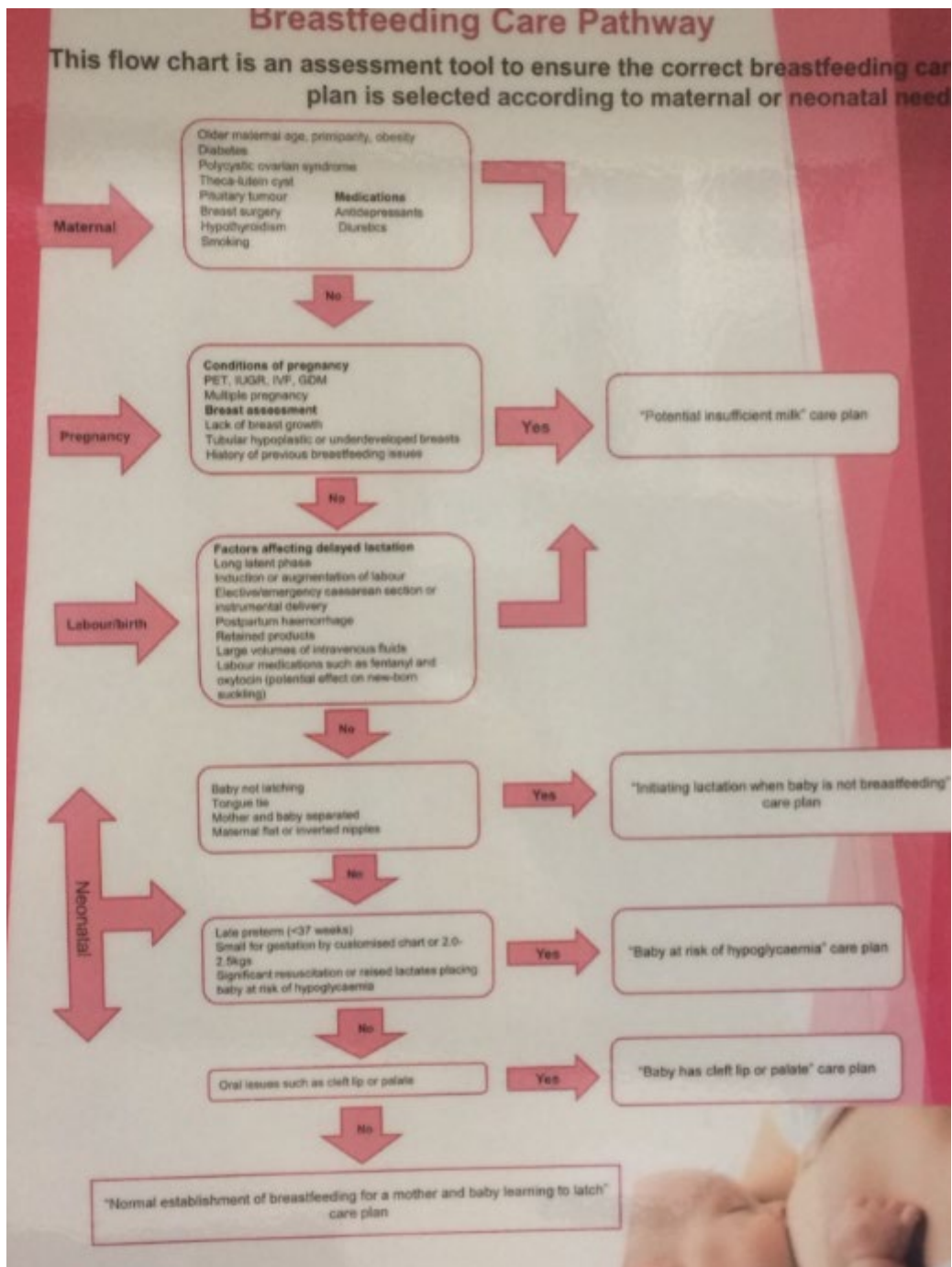


Figure 5: Breastfeeding plan poster

The *very last step* on this poster that gives guidance about working with women who are breastfeeding relates to a normal birth with a well mother and baby. Why does it not *begin* with this normal dyad, and then move to more complex possibilities? My field notes record numerous examples during my time in Birthing Suite where the word 'overkill' and the phrase 'arse-covering' were used by midwives to describe what they perceived as the over-reaction or over-treatment of women who came to the attention of the doctors. The woman with a chest infection previously mentioned was one example. Another woman, transferred in following a normal birth which had occurred at home due to an unexpectedly quick labour, was admitted via ambulance for a 'prophylactic' oxytocin infusion, despite having already birthed her placenta and having minimal blood loss. Another woman had a "bit of a fainty spell" (*field notes*) in the community but was near the hospital so came into the Accident and Emergency department to get checked out. Before she knew it, she was admitted to Birthing Suite, had had a chest x-ray and full neurological assessment.

A woman had a 'chance finding' on a scan of a shortened cervix – she was referred, admitted, given prophylactic steroids, a tour of the neonatal intensive care unit and was told she was in "imminent danger" (*field notes*) of having a premature baby. She wasn't experiencing any uterine activity at all. One registrar ventured "how do we know there aren't lots of women out here with shortened cervixes? Do we really know what her chances of delivery are? Before we scanned everyone we wouldn't have known about these women" (*field notes*) but his sensible questions were shot down by his colleagues who suggested it was important to be seen to be doing something.

Several midwives, both core and LMC expressed their frustration about this tendency to abnormalise women's experience, as a way to justify interventions. Of course the poignant expression of this for this study was the unnecessary artificial rupture of membranes and the administration of oxytocin infusions for women who were progressing 'too slowly'. After I had been in Birthing Suite for about a week, I had a conversation with a core midwife about the ratio of 'complex' to 'normal' women who had passed through in the few days I had been observing. I mentioned that I noticed that relatively few 'normal' women just arrived in labour, birthed their babies and transferred to the postnatal ward, primary unit or home. The midwife replied, "well, that's just how it is here, even if they come in normal, they don't stay that way once we get our hands on them" (*core midwife, from field notes*).

Being under surveillance

It became quickly apparent that everyone is under surveillance of some kind or another when in the tertiary environment, including myself during my observations. From the baby in utero, to the consultant of the day, everyone's every move is being monitored. Mostly this is benign and designed to enable the smooth operation of the facility - knowing where everyone is means that flow between staff and between clinical areas is balanced and efficient. But some facets of surveillance shape people's behaviour negatively, either directly or indirectly.

Well women with uncomplicated pregnancies are usually admitted to the Birthing Suite in spontaneous labour, accompanied by their LMC midwife. This 'nested bubble' also includes whomever the woman has invited to be a part of her birthing experience - "our little team" as several of the women I interviewed described it. If all goes well, and labour is straightforward, then ideally this grouping of people remains outside the purview of others in the Birthing Suite until a post-birth transfer is made to either the postnatal area, an outlying primary unit, or the woman returns home. The LMC will usually engage with the midwifery shift coordinator from time to time during labour to update her on the woman's progress and keep her informed about the woman's plans. Oversight by, or engagement with the medical team is unnecessary unless the midwife or woman requests a consultation. When this does occur, it is usually either based on a request for pain relief that is outside the midwife's scope for prescribing (epidural) or a concern is identified by the midwife about the woman's or baby's progress or well-being. The woman's name and details about her labour are recorded on The Board in the central office, which effectively puts her under the surveillance of anyone who has access to the office. This includes administration staff, cleaners, core midwives, obstetric doctors, anaesthetists and anyone else who happens by (researchers!).

While it is generally understood that 'primary women' (those with no complications, under the care of LMCs) are not the responsibility of the obstetric team, in practice these women are also being 'watched' by them. Both Anna and Lydia (doctors) described how they felt it was important to be aware of what was happening for these women at any given time. For Anna this was partly about being able to respond to an enquiry from a consultant:

You do get a bit more pressure from the older consultants to keep things moving, like 'why don't you know what's happening in room seven' and you're like, 'well, they haven't consulted, I have no legal right to know' and so that gets a bit... well, it's

why we usually just try to know what's going on. But, personally I believe we don't need to know what's going on in every room (*Anna, doctor*).

Lydia suggested that for her it was important to know what was happening by

...keeping abreast of what's happening in the rooms, the midwives where I work are really good at letting me know...keeping me updated with what's happening... because it's always nice if the emergency bell goes off, that I will already have an idea of where that woman's at (*Lydia, doctor*).

The anticipation of emergency bells was a commonly heard refrain, and another expression of the pervasive belief that something would 'go wrong' and the anticipation of not-normal.

The midwives had quite mixed views about whether or not the doctors needed to be kept informed about the uncomplicated women. Sarah wondered whether sometimes the doctors wanted to be kept abreast of what was happening because if the woman's midwife was unfamiliar to them, they didn't yet know if she could be trusted to consult appropriately. I had asked her whether, if everything appeared normal, the doctors wanted to involve themselves:

Sarah: That's a really interesting thing, some will and some won't. So, I have had conversations with some of the registrars, you know, that classic night shift where you can have a good old philosophical yarn, and some of the regs, if they're on, no matter what's happening with any woman, they see that woman as their responsibility, so that woman is, effectively, in their care, and, I totally get that, like, they are the registrar on call, so they want to know what's happening, and so if someone's in a normal labour, they'll still want to know what's going on, but if they're a particular person who thinks, 'oh, they're not progressing' then they'll get antsy, and then that will interfere with what's happening.

Suzanne: so, ok, if an LMC is here with her woman, and ...

Sarah: they'll have a conversation, and then some of those registrars will initiate that conversation, yeah, even though the

LMC hasn't consulted ... even though they don't need their opinion...they might just barrel in...

Suzanne: so even if the LMC is fully confident that the woman is progressing, in her eyes, adequately, whatever that means, then she might be pulled into a conversation about that, regardless of whether she's initiated that...

Sarah: yep, yeah, yeah, particularly if she's new, if the LMC is new. And some of the registrars, well, it's interesting watching them change as well, you know

Suzanne: well, yeah, 'cause they must develop their practice over time as well

Sarah: well, yeah, they do, and then they know who to trust. It's very much all about trusting each other as practitioners, and they'll know 'oh well, I don't need to worry, that midwife in there...' you know 'I don't need to worry about that room, that's all good' then they might see someone they haven't met before, they don't know where this midwife's come from. So, naturally, thinking that you are responsible, you will want to know what's going on.

Suzanne: mmm

Sarah: and I do think, more and more, that that's how the registrars feel (*excerpt from interview with Sarah, core midwife*).

Sarah's "then they get antsy" was corroborated by Anna

...for us, we're just planning what we're doing, it's not that we want access we just like to know, and then, if we look [at The Board] and go 'oh, they just haven't quite progressed...'
generally we're able to not go into the room, but just talk to the MSC, who can talk to the LMC and go 'hey, do you think it's time to talk to someone' and occasionally we'll say 'we really think you need to consult' and try to get the MSC to ...(pause)

Suzanne: facilitate the process?

Anna: yeah, that's it (*excerpt from interview with Anna, doctor*).

This can be complicated for the MSC who is caught between honouring the LMC's decision-making about continuing to support the woman without consulting and feeling some pressure from the obstetric staff to ensure that this happens. Assessing progress by looking at the Board occurred frequently, and midwives described how frustrated they were that decisions get made about management of labour 'around the Board' rather than 'in the room', let alone 'with the woman'. Sam (who had several years' experience as an LMC midwife and then joined the core) believes that regardless of how primary the woman is, the doctors believe they are in charge. When she was newly arrived to the tertiary Birthing Suite she felt...

Sam: ...well, I just felt... I had...tense conversations especially with some of the registrars ...and some of the obstetricians, you know, they just weren't willing to engage in a conversation, and just a total lack of respect for midwives and our knowledge, and what we bring, and that they're the end point, they're the ones...

Suzanne: so you think they see themselves as being in charge?

Sam: yes, yeah, yeah ... oh, yeah on the whole, that's how it feels... but that shouldn't affect a primary birth, because they should have no part in primary birth... (*excerpt from interview with Sam, core midwife*)

She went on to describe two situations where doctors had 'invited themselves' into the room when no referral for consultation had taken place, which she found very frustrating ... "she didn't need to come in, and I said 'you know, you kept trying to engage that woman in conversation and she's trying to have an oxytocin time here'..." (*Sam, core midwife*). Sam was referring to endogenous oxytocin in this example.

A few LMCs who I spoke with during breaks when they were attending women in labour had a different perspective about this. They felt, on the whole, that the doctors 'left them alone' – at least until the women were in established labour. Once this tipping point had been reached, they felt it was courteous and good practice to stay in touch with the MSC and let her know what was happening in the room, as a way of forestalling the intrusion of a curious doctor. This sentiment was echoed by Cassey, who felt that

When you're in the hospital, really trying to keep up your communication with the [MSC] is important, I think they trust more when you let them know what's happening in your room, a reasonable amount, not just disappearing into the corner and then potentially saying, well, there's been no change in five hours but... (Cassey, LMC, FG 1)

The midwives in the second focus group had had different experiences again, as the following excerpt describes:

Suzanne: and so if you're there with someone who's just chosen to go there rather than someone who's there because she's got increased risk, do the doctors leave you alone?

Willa: no, they usually swing by and say 'I'd like to introduce myself just in case we need to see each other later'

Suzanne: ok, is that your experience generally?

Charlie: yeah they'll do a round in the morning, they come around every morning, and they knock on every door at that point

Suzanne: and do a knock on every door at that time? (*all nodding agreement*) and what do you think about that – if you're there, with a primary woman...

Gia: they don't need to be there, I don't think they need to be involved

Willa: it's about anticipating that knock on the door, and going out of the room before they actually step into the room

Suzanne: because, will they just...come into the room?

Willa: yes

Suzanne: will they knock before they come in?

Willa: yes, they'll knock

Delilah: and come in

Suzanne: they don't knock and wait?

Charlie: no, they knock and come in

Gia; but if its normal, there's no need for them to be there

Suzanne; so they don't just leave you alone until they're invited in, because you're consulting with them?

Fern: not always

Charlie: sometimes, there's no black and white about that

Suzanne: and does that depend, again, on who the consultant is, on that day?

Charlie: yes, and how busy it is, if it's really busy they'll go 'you're not going to cause any trouble' ... 'no, I'm not going to cause any trouble',

Willa: and seeking them out, and saying 'I'm here for this, this is what's happening, see ya' (*excerpt from focus group two*)

Relational contexts – the people

World views and the problematisation of normality

Several midwives alluded to there being 'different world views' when comparing midwifery and medical practitioners' management of slow labour, and that although a collaborative spirit prevailed, these world views would often collide to the detriment of women's birth experiences.

I think that midwives and doctors are diametrically opposed sometimes...I think what a midwife can see as progress often the doctor doesn't see it in that way. I think that midwives often have more faith in women's bodies than some doctors. And I think that the doctors, they don't know these women... they come along...see them on the board and they say 'where's this woman at? Where's that woman at?' As midwives we would like to give women more time, a chance for their body to do what it's designed to do... but you know, they're not the ones who are sitting there feeling her contractions, so often we're

saying no I don't think this woman needs to be augmented.
(*Margie, core midwife*)

Sam put this down to a stronger focus on risk aversion being demonstrated by doctors "they are protecting women from the risks that could happen... most have really good intentions, mostly but not all the time, yeah, and they *care*, and you *can* have really good collaborative relationships" (*Sam, core midwife*), but she saw this risk aversion as contributing to the erosion of women's power. She said she "hear[s] women thanking somebody for saving them, and I'm just thinking "you didn't need saving – you needed saving from the establishment but you didn't need saving from your own body" (*Sam, core midwife*). She shared an anecdote from her recent experience to illustrate her point. In her story, a woman had had a bleed following her waterbirth...

The emergency bell went right down the end, we went in, this woman had just had this beautiful waterbirth, and she had started to bleed in the pool... the midwife got her out of the pool, and pushed the emergency buzzer, and everybody comes in , and you know, before you know it she's having Carboprost, she's got two lines in, her ... she hasn't even had, you know, the ... pessaries rectally and... you know I'm thinking do we have to do Carboprost? I say 'Do we really need to do Carboprost?' and the reg goes 'yes' and I go 'are you sure?' and I'm standing here thinking 'there's no way we need to do Carboprost, and the poor family are there looking like... oh..., like their loved one is about to die... that woman had just had such a beautiful empowering birth, and by the time we'd finished with her she had needles in her, she had vomiting and diarrhoea because of the side effects, and I went back to the office and I said 'well, what do you think of our care there? We just ruined a really good day (*Sam, core midwife*).

Willa suggested that the doctors "don't have as much invested" as the midwives do. When prompted to explain whether this referred to the woman's experience being important to her, as the midwife, she said "well yeah, that's why we're here, that's why we do this" and Fern later said "well, they're used to abnormal, they're always looking for abnormal, whereas we look for normal, they see all the bad stuff..." (*Willa and Fern, focus group two*)

Who holds the power?

Gia felt it was also about having control

Gia: ... they don't see normal as much, and so I feel like they're just more nervous – yeah they're almost more nervous around a normal labour that might just be taking a bit longer, they don't see it that much so they just don't get it

Fern: it's more usual for them to see a high-risk induction, everything's monitored,

Gia: yeah, they've got control over everything, they've got a CTG on, they can see what the baby's doing, and so they've got control over that... they've got a fetal scalp clip on so they've got even more control of that, and ... they've even got control over contractions with syntocinon, you know they can control even how many contractions a woman has, to me it's all about them having control, whereas, [at the primary unit], the women are in control (*excerpt from focus group two*).

Willa did claim some personal control however, during a snippet of discussion about who 'holds the power' in the institution

Fern: the doctors

Willa: and the charge midwife

Gia: I certainly don't feel like I do,

Delilah: no, we don't

Gia: and the women don't

Willa: I don't know, when I am in the room, with the door shut, I feel I have some power, and it's about putting the lock on, putting the mental lock on, yeah (*excerpt from focus group two*).

Notions of power and control dominated the midwives' conversations, and mixed views were expressed. Margie felt that in her role as a core midwife she enjoyed a reasonable sense of autonomy, although not across the board:

I think that doctors and midwives work quite well there at [study site] I think we have quite good, staunch senior midwives and the [midwifery shift coordinators] are just great, you know they're very experienced...

Suzanne: do you think that midwives have a reasonable amount of... hmm, for want of a better word...power in the situation?

Margie: yeah, I really do, I think that we really do....we're listened to...though maybe... in an area where we're not so much would be with the private consultants, they pretty much get their own way (*Margie, core midwife*).

Margie is a senior midwife who felt that her seniority probably made a difference to how her interactions with the medical staff unfolded and she conceded that newer midwives did not necessarily enjoy the same levels of respect from obstetric staff. Sarah, also an experienced core midwife, felt less certain that midwifery autonomy was championed, also noting that seniority was valued by the obstetricians:

Suzanne: and do you think the midwife has much autonomy, in that space, around that decision-making?

Sarah: um, no.

Suzanne: okay, do you think midwives are listened to?

Sarah: No. Not.... no. I think, well, again, its practitioner dependent, but um...

Suzanne: for the midwife or for the...other practitioners?

Sarah: well, for both.

Suzanne: do you think seniority is a thing?

Sarah: yes, for sure, ... seniority is a thing

and despite my closed line of questioning Sarah went on to discuss at length how difficult the landscape is for newly graduated midwives in this setting in terms of developing clinical autonomy:

Sarah: ... like you're a new grad say, and there's an MSC out there, they'll be making those decisions for you

Suzanne: oh, okay

Sarah: a lot of the time, especially if you're... well, and I think a lot of the newer midwives don't mind that actually, I think that they actually so need that support, especially around inductions and things like that, they really need that support, but sometimes I think they just get over-ridden

Suzanne: okay, by other midwives you mean?

Sarah: um, yeah, well, by the MSCs

Suzanne: hmm, it's very hard as a new person, isn't it, to hold your space?

Sarah: oh absolutely, yeah, yeah, and a lot of the time, you actually do need that, you need that direction ... so it's good that they have that support, but it would be very difficult for them to be real advocates for women (*excerpt from interview with Sarah, core midwife*).

As I settled into my observation period I made some notes in my reflective journal about my perceptions of how power operated within the Birthing Suite

Who holds the power? In subtle ways it's the admin staff! One came out and asked the MSC if she could go and "remove" some family members who were sitting on the floor in the corridor. She relishes her role as guardian of the walkways, 'keeping an eye on things'. The MSC definitely holds some power – although appearing consultative about the workload allocation in fact she ended up telling each person what to do. Offered the STMW first pick of who she'd like to work with – the STMW paused for just a second, then said 'oh, I am happy with anything' so was allocated to assist with the preparation of the elective CS women.

The MSCs hold quite a bit with respect to organisational flow but maybe less in relation to clinical decision-making. I have

heard occasional challenges made to the doctors about their management but this is usually after the fact rather than before, eg around ARM decisions etc. (*from reflective journal*).

In one instance I reflected on the power dynamic between myself as the researcher and the doctors who had initially seemed very receptive to my request to come and speak with them at their weekly education meeting

Got an email re the doctors meeting – now they can only give me half an hour, as “there’s another 20 minute thing we need to do as well”. This is really disappointing. It perhaps reflects the relative importance its being viewed with, but then again, they are squeezing me in so I am ?grateful about this. This interests me that it is gratitude I feel. This reflects a power dynamic I am increasingly aware of ... everything, including ‘being delighted to help with the research’ is on their terms. I am grateful for their crumbs. It’s a bit sick. (*from reflective journal*)

The doctors expressed ideas about power in more subtle ways, and what was striking in their sentiments was a complete lack of awareness that their words even conveyed ideas about power. A few examples will suffice to give a glimpse of this unquestioned entitlement to be in charge. This ‘fish can’t see water’ approach highlights how deeply embedded their belief in their authority is, despite a rhetoric of power-sharing and recognition of both women’s and midwives’ autonomy.

I don’t know if you can really talk about progress of labour until I have decided if she really is in active labour (*Rowan, doctors focus group*)

Sometimes the woman will come and she’ll say oh, you know ‘I have been in labour for a whole day’, and I’m like, ‘well, that’s not really labour yet’ (*Amanda, doctors focus group*)

It’s not like we have on the wall ‘when do you want your epidural’ it’s not like an advertising thing (*Anna*)... yeah, they don’t get one until we agree... (*and Amanda, excerpt from doctors focus group*)

No-one's going to be making any decisions without them, but they're not going to be just going on and on (*Dr L, doctors focus group*).

Challenging medical dominance or acquiescing to 'keep it sweet'

Sometimes the midwives shared stories about situations where, during their efforts to protect the woman's experience, the doctor had dismissed or over-ridden their opinions. This led to the midwives feeling frustrated and humiliated. My field notes record a conversation with a core midwife who was still feeling angry two days after this event:

... she was really upset from the other day when working with a primip, it was an IOL, the woman was having second assessment after the prostin around 1pm. The core midwife had assessed that the woman's cervix was 2-3 cm long and 1-2 cm dilated. She advised the woman that it would probably be wise to do another dose of prostin, and then wait until the next morning to do the ARM. She felt she couldn't possibly have done an ARM at this VE. The reg came in, reassessed the woman, and did an ARM. 'That poor woman was up the bed, screaming' and as the reg walked out she said 'the midwife will put up the medicine' and that was the extent of the 'informed choice' conversation. The core midwife felt completely undermined, and like she had been made to look either stupid or incompetent in front of the woman ... 24 hours later, that woman had a CS - the core midwife said 'we could all have seen that coming'. I asked her, 'how come it is hard for midwives to question practice like this?' She responded by saying 'five years ago I would absolutely have said something. Now I just go, oh well, you can't change anything. They just get their way and think differently than we do about it. There's no patience. It's too hard' (*from field notes*).

A similar incident was recalled by Charlie:

I had a situation earlier this year ... older primip, ... very well-trained professional woman, came to a long second stage, the registrar was fairly new, and she brought in the consultant, he

said 'right, you can have a choice, you've got a caesar, or you can have a ventouse. What do you want to do, now?' And there was no way that he was going to leave the room, and she [the reg] said 'we'll do a one-pull ventouse' so I said 'if you're doing a caesar or ventouse, shouldn't we be in caesar theatre?' and he said 'no, we'll just do it here' so we had...failed ventouse, failed forceps with no epidural or anything before we then moved on and did the caesar. And this woman was totally traumatised, because she was told 'I have a choice', it sounded like it would be very easy, and he certainly didn't stop at one pull. She was traumatised, so we had to go back into [study site], she wouldn't have a bar of him, but we had a long meeting with [the clinical director] while she tried to calm the waters

Willa: she had a lot going on postnatally too,

Charlie: yes, she had a lot going on postnatally with really poor feeding too, and she had the episiotomy too from the failed instrumental

Suzanne; so she had an episiotomy and a caesarean?

Charlie: yes, and quite a ...marked baby, you know from the forceps, so yeah, a lot going on, but she was ...she said to me afterwards 'couldn't we have gone higher?' I said 'he was the top of the food chain that day' and... I felt that I'd let her down, because even the MSC, she was intimidated as well, she said 'I have often been thrown under the bus by this person' and I felt that way...there's a limit to how much you can challenge in front of the woman when you're all trying to provide, you know, a united front.

Willa: and that's a really interesting thing, we're all very good at...trying to make it better, and provide that front for the woman, ... *they* don't care, you know oftentimes the registrars and consultants, whoever is doing the doing, they'll throw us under the bus happily, whereas we will try and try not to do that to them, we try all the time to be professional (*excerpt from focus group two*)

Midwives “making it okay” for the woman was a refrain often present in midwives’ conversations;

You’re in a place of compromise, and it’s demoralising ... but you just have to... put up with that guilt perhaps, and you know, pull up your big girl pants and do the best you can, and make it as decent a situation as you can... and it’s awful, because you find yourself bold-faced lying to people

Suzanne; you mean about their progress?

Sarah: yeah... well you might see them in the postnatal area afterwards, or a day later, and you know they’ll go ‘oh, yeah, that was right, I wasn’t progressing’, or ‘I couldn’t have done it any longer’... but *you* know in your heart of hearts, well actually you weren’t really given much of a chance but you just have to nod and say ‘yeah, that’s right’ because that’s not going to help *her* to go, ‘oh but...’ (*Sarah, core midwife*).

Sarah expressed it thus: “...people are just battle-weary, they’ve tried to stand up for things before... and have been ridden roughshod over, and, you know, it’s very difficult to have those conversations...it’s a real hit on their resilience...” (*Sarah, core midwife*) and another core midwife acknowledged that among the consultants “...there’s an element of ‘I’ve always done it this way’ and a reluctance to accept new evidence as it emerges so they [midwives] feel like they’re hitting their head against a brick wall and stop trying to change things” (*from field notes*).

One morning the midwifery shift coordinator, upset about the effect that a spurious medical protocol was having on a woman, was ‘handing her over’, to the next shift. My field notes record

The midwives are questioning this regime and everyone has an opinion. The morning MSC is obviously angry and frustrated, sits holding her head like she has a bad headache, drinking coffee. She snaps ‘well, the boss is the boss we just do as we’re told’ and this effectively shuts down the conversation (*from field notes*).

The following excerpt comes from a discussion about challenging medical decisions:

Willa: or, even, recently... a woman who was 9 cm and the consultant felt she wasn't moving fast enough, did a VE and said 'oh, I'm going to break your waters while I am here' and boom! done, no consultation, no discussion, horrific...so that kind of thing happens

Suzanne: and how is it for you as the midwife witnessing something like that, is it...how easy is it for you to challenge those decisions?

Willa: with this particular consultant, I wouldn't

Suzanne: ok, ...what would prevent you?

Willa: oh, a little bit of fear... or quite a lot of fear...but also, I don't agree with what she did, but actually, you have to put that to one side, you have to make it okay for the woman

Delilah: yeah, if it's in front of the woman you can't... you just can't ...if you disagree, and they're doing it...it's difficult to say 'could we just have a wee chat about that, could we just hop outside?' Yeah, so it's not a very...

Willa: equal playing field

Delilah: yeah, you can't really do that, in front of the woman

Willa: making it okay for her – that's the priority (*excerpt from focus group two*)

Cassey felt "totally bullied" by a consultant who came in at 11pm and over-rode a plan she had made in consultation with her woman and an experienced registrar to allow her to push a little longer in second stage.

... then the consultant came charging into the Birthing Suite, furious, and said 'this has been however-many hours, so that's not reasonable' and I said, 'well, there's been no pushing...', and I said 'the CTG's looking perfectly good' but he came into the room and had a look and said 'those are... ' he made up something basically and said 'those are decelerations' and, we were in [the normal birth room] so had to change rooms and

have an assisted delivery, so we were bullied into that (Cassey, LMC, FG1)

The midwives described a kind of cumulative effect that encounters such as these had on their practice. Many expressed that while once they would have worked hard as women's advocates, over time they had relinquished this role, finding themselves acquiescing to doctor's "demands" even when they knew that evidence did not support the proposed course of action.

Self-sacrificing behaviours

I grew towards an awareness of some midwives' surrender to this process. Some seemed prepared to subjugate their own knowledge or clinical decision-making in order to improve the woman's experience. Newer midwives second-guessed their knowledge base. Several of the women too, sacrificed their own well-being for their baby's, accepting interventions even when they didn't want them because they wanted to ensure their baby's safe passage. Once I noticed this tendency towards acquiescence, I began observing to see if other practitioners also engaged in self-sacrificing behaviours. Apart from one incident when a SMO suggested that he would not change a management plan that he disagreed with because he didn't want to "second-guess" his colleague, I saw no other such behaviour from any of the medical staff. Tellingly, the midwives one morning described the "sacrifice" a registrar had made – staying up all night to "keep an eye on" a woman who had been induced (*field notes*). This registrar was on shift, was being paid to be working just the same as all the midwives, but somehow his decision not to go to sleep in the doctor's room was presented as heroic!

In stark contrast to the stories midwives told me about not questioning decisions in order to 'keep it sweet' for the women, the doctors I spoke with were eager to tell me about how collaborative they found their work environment. Lydia was talking about how in some places she had worked, there had been "quite challenging relationships between doctors and LMCs" but that

here, it's really good... if the midwives don't...agree with my line of thinking or with what I'm saying, then they will actually go, well, we will leave the room, and have a quick chat...so I feel like we're quite open to having that discussion (Lydia)

Anna enjoyed the "open door" feel of this hospital and said "there's quite a good bit of conversation" between the doctors and midwives, a situation she also identified as

having been absent in other hospitals she had worked in. It is interesting to contemplate the sense of dissonance between what the midwives told me, what the doctors told me regarding the collaborative atmosphere they enjoyed and what I observed first-hand. I reflected upon the perceptions of satisfaction about these relationships in the workplace

...does the degree of satisfaction in their role equate to working in a way that aligns with one's philosophy? Are the "in-charge" doctors happy, describing birthing suite as a "fun place to work" – busy, active, collaborative, open-door – juxtaposed against the midwives who say birthing suite can be a "terrible place to work" where they feel compromised, and lack autonomy, but where their midwifery colleagues and their relationships with women make it all worth it? (*note form reflective journal*).

Women trusting their midwives

An important finding with significant implications for midwifery practice was that often the interviewed women conveyed that although they knew the doctors had a particular thing in mind (usually an intervention) it wasn't until the midwife concurred that it was a good idea that they considered it more seriously. This signals that these women trusted their midwife in a different way than they trusted the doctor and valued their clinical judgement highly. It seems there is a suspicion among some women that if the doctor gets involved, that is about interventions which may or may not be necessary – but if the midwife agrees about administering the intervention, this becomes more trusted advice.

I didn't have time to feel scared, and because I trusted... well as soon as [midwife] said, 'ok, we need some other people to help us out now', I knew yep, this is it... and so as soon as she said that I knew, ok, this *needs* to happen, prepare myself for the worst, kind of thing (*Bobbie*)

It was like, the doctor was there, and [midwife] was there, and the doctor was trying to encourage me to make the decision to have the c-section and I was... well, I didn't want to do it if I didn't really have to, but at the same time I didn't want to ...risk... you know, something with him [*indicating the baby*]... but then once [midwife] was over here, looking at all his

numbers, and said, 'Oh you know what, his numbers are beginning to change, maybe we do need to do something', I was like, well, that's the end of it, let's not mess around with that (*Diana*).

Anna seemed to agree that there was a group of women who may not 'trust' that doctors had their best interests at heart...

... generally it's the ...sort of, the teachers the lawyers the thirty-something first baby white middle class, its usually that group, they've googled, they've talked to friends, that's a very good indicator... it's not that they're obstructive, but a little bit like... sometimes you just think, actually, you don't quite understand what you're asking, it's almost like they're a bit detrimental to themselves, you know, they SO don't want intervention but you're like, a little bit of intervention is a good thing sometimes, but they're less trusting, and that can be a bit difficult sometimes (*Anna, doctor*).

The sentiments expressed here by Anna do hint at an assumption that she holds the 'superior' knowledge which should be the driver of the decision-making. She later opined "ha, I find I am thinking sometimes women are their own worst enemy...it's hard, and I sound like I am blaming them, but it's hard to get people into the... hmm, it's a slippery slope...." (*Anna, doctor*).

Summary

Reflecting the *actual* domain within critical realism's ontological structure, the findings reported in this chapter highlight some environmental determinants shaping the experience of well women giving birth for the first time in the tertiary setting. These seen and unseen factors contribute to the culture of this organisation which in turn gives rise to the empirical findings observed in the previous chapter. Environmental influences are related to both the place and the people, and they conjuncturally align in both helpful and unhelpful ways. Some alignments are physiology-promoting, and others are technology-promoting. The following chapter takes us even deeper by examining the structural undercurrents that drive what happens in this birthspace. In Chapter Eight, the generative mechanisms within the *real* level which create the events at the *actual* level will be postulated and their emancipatory potential explored.

Chapter Eight

Surfacing what lies beneath

Introduction

Data chapters Six and Seven have described the findings within the *empirical* and *actual* levels in the analytic framework of this thesis, derived using both deductive and inductive thinking processes. Chapter Six exposed how labour augmentation procedures were often inappropriately applied in this maternity setting and lent understanding to the ways that women and clinicians experience first birth. Chapter Seven revealed how elements within the birth environment shape the experiences of women and the practice of clinicians. The purpose of this chapter is to explore the underlying mechanisms that give rise to the environmental influences of the *actual* level. When the contingent structures and agents come together in particular ways, causes can be identified for how their joint effects might inhibit the ability of the birthing women's network to enable physiological birth to unfold in this space. By creatively constructing new ways that the mechanisms might interact, it might be possible to positively influence the choices that agents make. Critical realism contends that within open systems, such as hospitals, people act as agents who have the capacity to make choices about whether they operationalise the causal tendencies that exist within the underlying generative mechanisms. Women, families, midwives, doctors and managers are all agents in the tertiary birth setting, and all can exercise choice about whether or not to actualise the tendencies of the generative mechanisms to exert power over their choices.

This third and final results chapter maps the underlying *generative mechanisms* which create the conditions in which women experience giving birth in the tertiary maternity setting. The beliefs held by all the players in the theatre of birth strongly influence whether the potentials that exist for risk-aversion, power-wielding and women's self-sacrifice will be exercised. The education and socialisation of midwives and doctors hold potential to determine how relationships between women and midwives, women and doctors, and midwives and doctors shape the woman's experience. The industrialisation of birth which means that the tertiary maternity setting now resembles a 'birth factory' where efficiency and technological advancement are valued is explored. Lastly, available social discourses determine what makes a good midwife, doctor or mother, and these are causally contingent factors that contribute to the enactment of the identified mechanisms. As a source of potential emancipation, a re-

imagining of how the causal mechanisms might conjunct could spark a new understanding about who's interests are paramount, whose evidence matters, and how services can be determined not by 'what works' for the organisation, but by 'what works' for women giving birth.

While still dwelling within the data obtained from the interviews, focus groups and observations, this chapter necessarily requires the use of abstraction – or positing of possible explanatory causes and theories – and thus has a more speculative feel which has used my knowledge and experience (positionality) as a midwife as a basis for the development of these abstracted possibilities.

Believing in birth

'Believing in birth' was a concept that surfaced spontaneously within the midwifery interviews and focus groups, as well as the women sometimes describing the importance of their support people and midwife believing in birth or believing in them. It was identified as an important contributor to protecting physiological birth. "...still believing in her, that's the greatest protection for her and her process" (*Delilah, LMC, FG2*) and "...if everyone has that faith and that belief it makes a huge difference to the woman in labour" (*Gia, LMC, FG2*). Margie said "I think that midwives often have more faith in women's bodies than some doctors" (*Margie, core midwife*) and although this suggests that she believes the obstetric staff sometimes 'have faith', it was not a concept that featured in the discussions with doctors. The words 'belief' and 'faith' may hint at a spiritual or 'etheric' realm being associated with attending a birthing woman; the midwives spoke about "protecting" and "holding the space" for women to enable them to "give birth", whereas the language used by the medical staff tended to be focussed around "being safe" and "being delivered". While arguably these are just semantically different ways of expressing similar ideas, words are powerful and convey a world of layered meaning and understanding.

Women's choices and experiences are strongly shaped by those that provide maternity care to them, and their expectations for birth reflect their education and socialisation as women, and potentially as mothers. Available social discourses and the geopolitics of birth determine what the woman, her family, the midwife and the others involved in her care can expect at this nexus. My field notes record an anecdote told to me by an LMC midwife who was supporting a woman having her first baby, whose labour had not yet reached the 'tipping point' of being called 'established'. We were discussing the audit

findings, and the poorer outcomes for women who had experienced an ARM prior to established labour. My journal records:

She said she would never ARM anyone under 4cm, or who wasn't established, 'it sets a woman up to fail, we should leave women alone, let them get on with it, don't interfere'. Her woman suddenly hit her straps at 4cm and progressed quickly to fully. Then later in the office, the LMC said 'yeah, she's amazing, she's made such great progress. But I don't want to get her pushing because there's no-one around ... and what if the baby turns to shit?' – so despite all the talk about physiological birth and belief in women, she hasn't indicated any trust that this process will continue to be normal (*notes from reflective journal*).

Wanting to 'help'

Both the midwives and doctors believed that the support of women in early labour by family and friends was an important strategy to reduce the likelihood of admission 'too early' and the chart review data confirmed that admission during latent labour more often led to augmentation procedures being used. The women in this study reported that their partners/husbands and other family members sometimes struggled with knowing what to do or how to be helpful. For some this occurred despite antenatal education which focussed on teaching supportive cares.

A paradox about 'help' was identified in several of the women's stories once they had moved into the hospital. In their attempts to help their loved ones in labour, some support people perhaps unwittingly contributed to hindrance of their progress. Several of the women spoke about the difficulty their partners experienced witnessing their labour 'distress', and for some the decision to request an epidural was in part tied up with alleviating this difficulty. Many midwives voiced a strong conviction that 'belief' in the woman's ability to give birth by all those around her made a big difference to whether she achieved a normal birth. The 'paradox of help' refers to the way in which 'doing nothing' - quiet watching waiting and supportive presence (physiology-promoting activity) can be more helpful than 'doing something' by rescuing women from their distress by the intervention of anaesthesia which so frequently cascades to an oxytocin infusion and assisted or surgical birth (technology-promoting activity).

The women described the things that their support people did that helped them to cope with early labour sensations. These included verbal encouragement ('you can do it', 'you're doing a great job'), 'believing in me', to massage, being held and hugged, scooping water over her back in the tub, holding hands, good eye contact, suggesting different positions, physical support with squatting or standing, providing reassurance, keeping good music playing, help with movement to the toilet, keeping the atmosphere light-hearted, bringing things and anticipating what might be wanted next – birth ball to bounce on, running the bath, being ready with the water bottle, and feeding snacks.

But there came a time when the intensity of the labour experience became overwhelming for some support people:

My husband was starting to get more frustrated... you know I was in pain ... he was frightened, he actually got a bit teary and he had to go out of the room (*Maria*)

Unfortunately my partner was like...he did say he was feeling so panicked, just looking at me, uncomfortable in the bath... he didn't even think 'shower', you know the showerhead was right above me (*Mary*)

I was crying because of the contractions... my husband was crying too, he was a mess, he was sitting on the floor, we thought he was going to faint... (*Nicole*),

and in some instances this 'partner distress' lead to the woman making choices that they had not intended to make:

... but my husband was like... 'take what you can get' because he didn't want to watch me like that, you know, so that was hard... because you know, I just didn't want to do that and I didn't think I'd need it (*Diana*).

...my husband was worried that I was getting too cold and so he thought it might be best if I ... got onto the bed. So...yeah...but for me it was more comfortable in the water, and like, the pains were getting really strong, and my husband was worried that it was getting a bit much for me, but going into it... I didn't want any intervention... when I made the decision to get the epi[dural], my husband was really happy about that because he

was beginning to really worry just looking at me, you know the pain was getting harder and harder to deal with, and he kept on saying 'just ask for some pain relief, honey, please ask for something', and I was really adamant, I said 'no – I can still go on', but when I got the epi he settled... (*Maria*)

...he couldn't stand seeing me in so much pain ... but then we got the epidural and the pain went away and I was happy again... when we got to the hospital I said 'well I don't need the epidural, I've managed so far and it's just one more centimetre', so when he saw me crying he just looked at me and said 'do you want the epidural?' so I didn't even think about it, I just said 'yes! Now!', so he sort of made the decision for me. He got my yes, and then he told (midwife) 'she wants the epidural' (*Nicole*).

Family members featured strongly in some accounts: Anna felt that sometimes the doctors were drawn into offering augmentation against their clinical judgement due to pressure from family members

I don't think we pressure them to be augmented... its more whether you feel obligated to do something because that's what people want, I guess, they're tired, they're ready to have their baby, the thing you get is, 'I'm too tired to push the baby out' or the husband's saying 'she's too tired she needs some rest' (*Anna, doctor*).

For Maria, the presence of her sisters provided a staunch source of inspiration, and she was determined to do the best she could to achieve a normal birth "for them", because neither of them had experienced this for themselves

Maria: I didn't want any intervention, from very early on in my pregnancy, I wanted to see how far I could go without any of it, just because I felt like I could do it without having any of that help.

Suzanne: okay... mmm, what do you think gave you that confidence?

Maria: well, my sisters have done it and I've watched them...they've both gone through it and said no, so for me, I

was quite confident that I could do it as well, and I knew all I needed was to get through it with support and I could push him out, and that was the thing that really urged me on, because both my sisters... they went through c-section and one had an induction, so I felt like I was not only doing it for myself, I was doing it for them as well, because they both hadn't experienced the whole pushing thing... so I stayed in the water until, throughout the night until the next morning, and then got out of the water, she examined me again and at that point I had only gone to five centimetres... (*excerpt from interview with Maria*)

Later in her labour:

I found it really hard to look at my husband because, you know, you could just see the pain in his eyes, he felt sorry for me and what I was going through, so I found it hard looking at him, so for me... to push me... you know what motivated me the most was looking at my sisters and hearing them, because you know they were like 'you can do this, you can do this, breathe, push, you know you can do this' they really encouraged me. I had to stop myself from looking at my husband because I could just see that he just felt so sorry for me (Maria)

and finally when the decision for caesarean was made, again her sisters featured strongly in enabling her to accept the decision

... because I had been pushing for so long...and my sisters were there saying, you know 'you can do this, sis', I was like 'I can do this, I can push the next half an hour and see if anything happens' but then my husband just looked at me and he said 'you have already pushed for an hour and a half, you know, we need to make sure son is okay and you are okay' so then my oldest sister ... she just looked at me and said 'its ok, sis, it's alright', so then I just broke down, because I knew that what I would say next was 'just take me down for a c-section" (Maria).

Having a baby is thus viewed by some as a 'shared' activity – it's their baby too - and the woman's autonomy can be challenged when decision-making is shared in this way. Each of these women protected their partners by acquiescing to *their* needs, even when this obliged them to agree to interventions they had previously been disinclined to accept. But their partner's autonomy can also be eroded by the environment they find themselves in. Mary expressed this well when she told me about how her husband's ability to help her waned as the day unfolded. Even though her narrative contains a hint of disappointment about her unmet expectations of his support skills, she nonetheless protects him by suggesting his "high pressure job" and marginalisation once in the hospital may have influenced his ability to provide what she needed:

Mary: I am one of those people who... that sort of touch is very calming for me, and that was something where I said to my partner you know, do massage and all those things. Unfortunately the massage didn't really work for me, in the sense that I didn't like being touched on my lower back, but it definitely worked, hands on shoulders, hands on legs, was just great, immensely calming just feeling presence

Suzanne: great, so what other things did he do that you found really helpful?

Mary: um, hate to admit it... but not much... um, we'd done a lot of talking about it but he has quite a high pressure job, and I think it kind of went in one ear and out the other... but he was very supportive, it was more vocally supportive, you know, 'you can do it... try this...lots of verbal encouragement, which, to be fair, was great, but I think we'd spoken a lot about a few other techniques that I would have preferred to try .. like him actually hugging me and holding me, and you know, more kind of directive positions, rather than me telling him... well, hoping... in hindsight not such a great thing, but kind of hoping that he would figure it out, do this, you know being a bit more directive and coaching me, in that sense. But in saying that, I mean... I spoke to him afterwards and he just said that because of the way that it progressed, and obviously he'd been up really early in the morning and then throughout the day... at home, he felt like he could help because he could bring me things, he could

massage my shoulders, he could put music on, and change the music, he was timing contractions, you know he had a job. The minute we got to the hospital he didn't know what he could do, and so, handing over to the midwives and then being, kind of floating, he did say that he almost felt like he was floating, he felt a bit useless and then by the time that the big team came in he felt like, in many ways, like he shouldn't have even been in the room, because he wasn't as involved and... well small things, like he ended up cutting the umbilical cord but it was kind of like 'and here's the scissors and here you go' rather than a ... I guess in his eyes, he thought that was going to be a really special moment, and then, it just wasn't. He has a very, very, very different story with regards to my birth than me (*Mary*).

These stories provide further insight about the self-sacrifice of women during their birthing time, and they beg the question about the lengths women may go to, to 'make it okay' for others even to the detriment of their own experiences. When this tendency is actioned alongside the identified tendency for midwives to acquiesce to obstetric interference in order to protect women from conflict in the birth room, this conjunction may serve to reduce the chances of normal birth outcomes. 'Belief in birth' may therefore constitute the first generative mechanism - when belief is present in the woman, her support people and her caregivers, conditions are improved for achieving normal birth. When belief is absent, women may be more inclined to accept interventions, family members more inclined to encourage them and midwives and doctors more likely to recommend them.

Educating for birth

Midwifery education

The genesis of how relationships develop between practitioners and women, and also between practitioner disciplines, is likely to lie in part in the ways that midwives and doctors are educated and socialised. In Aotearoa New Zealand, midwifery education is a *specialist* direct-entry educational pathway. Standards for midwifery education are set by the Midwifery Council of New Zealand (MCNZ, 2015) and Schools of Midwifery develop their curricula independently but must meet these standards in terms of content and required hours. Midwifery education currently comprises a four-year degree programme which includes 4800 hours of theoretical and clinical content. The

final year of study is typically provided in an apprenticeship-type model, with clinical practice in a range of maternity settings including homebirth, primary, secondary, tertiary and rural contexts.

From the very first weeks of a student midwife's education, she is engaged in relationships with individual women as she "follows through" their experiences of pregnancy, birth and early parenting. At first this is in an observational role, while the student's skill base is developing, and the focus during this time is to understand the woman's experience *from the woman's perspective*. In most curricula, the student midwife is not 'attached' to the registered midwife or obstetrician providing the woman's care, but rather is 'attached' to the woman during these early months of their education. The student midwife therefore experiences the same frustration as the woman when she is kept waiting for an appointment or cancelled out at the last minute. She witnesses the woman's excitement on visualising the baby at an ultrasound scan, or her disappointment at the diagnosis of a placenta praevia which will have the potential to derail the woman's homebirth plan. She observes the transition that parents experience introducing a new baby to the lives of their other children. Reflection on these experiences sows the seed for the student midwife to develop her ideas about her professional identity – about what kind of midwife she wants to be, what practice she wishes to emulate and also how she might *not* choose to practice, because she deeply understands the effects that different styles of practice have on each woman's well-being. By following women cared for by different practitioners, she understands the nature of midwifery partnerships in action, and has an opportunity to compare these relationships with those she observes between women and obstetricians. If the woman is receiving fragmented care, as some do if they have a high level of complexity, the student midwife gets a feel for the effects of dis-continuity and the frustrations of miscommunication between practitioners.

As her competence increases, the nature of these 'follow-through' experiences changes – the student becomes 'attached' to the registered midwife and under her supervision begins to provide some components of care, right through to eventually facilitating antenatal and postnatal appointments and facilitating births under the midwife's direct supervision. Thus the student midwife's education is focussed on relationships that are underpinned by the midwifery philosophies of partnership and continuity of care, and deeply held beliefs about equality and the reciprocity of informed choice and consent within these relationships. They practice in both the community and in hospitals, in urban and rural environments, so that they understand the complexities associated with decision-making in remote areas at distance from

specialist care. The other fundamental beliefs associated with midwifery education are that birth is a normal life event, and that promoting and supporting physiology is the best conduit to normal birth.

Supporting their education as practitioners of the art and science of midwifery, student midwives are also expected to develop skills as consumers of health care research, in order to be able to synthesise evidence from multiple perspectives and translate this knowledge into an ability to share information effectively with women. Understanding health statistics is an important part of this, because informing women about the risks associated with particular conditions or interventions requires facility with explaining the difference between absolute and relative risk, how to interpret numbers needed to treat, and so on. Student midwives learn how to present information about risk in ways that are meaningful to women, for example by focussing on the more probable positive outcome whilst acknowledging the (usually tiny) possibility of the negative outcome. Student midwives are also invested in examining qualitative research about women's experiences in the maternity context, so they can meaningfully apply this knowledge generated by women into their practice. Thus, midwives' educational and ongoing practice journeys are strongly focused around these close relationships, and the midwives in the focus groups described feeling very "invested" (*field notes*) in assisting women to safe and satisfying birth experiences as a result.

Medical education

Medical education in Aotearoa New Zealand is, in contrast, a *generalist* education pathway until several years have elapsed. Typically the first meaningful encounter a medical student has with pregnant women is during their Trainee Intern (fifth) year of medical education. By the time junior doctors come into clinical contact with women who are pregnant or in labour, they are inculcated with the problematisation and treatment of health concerns. By the time they choose to specialise in obstetrics and gynaecology in their sixth year of education, they are well-versed in pathology, surgery and pharmacology and as such are skilled and highly competent in providing solutions to perceived problems within these realms. They provide a complementary set of skills alongside midwives, who are skilled at recognising deviations from physiological pregnancy and birth processes, and who make referrals to them according to an established set of guidelines (MoH, 2012). A close inspection of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) Curriculum reveals that in terms of education about evidence for practice, whilst budding obstetricians are expected to be intimately conversant with biostatistics and

the breadth of quantitative research types (RANZCOG, 2017, p.18) there is no expectation for facility with qualitative research modes which importantly inform practitioners about the nuance of women's experiences in relation to maternity care. On approaching the registrar who coordinated the doctors' education session I attended to run the focus group – he intimated that the doctors were unfamiliar with qualitative research methods and urged me to spend five or ten minutes of my half hour with them explaining the basics about this research approach and reassuring them it was 'real' research!

Inevitably, there has been a historical and pervasive tension between this relative 'focus on normality' and 'focus on pathology' exhibited within the professions of midwifery and obstetrics, and much scholarship has focussed on the differences between the so-called "social" and "medical" models of birth which position birth as (respectively) 'normal until proven otherwise', compared with 'normal only in retrospect' (Davis-Floyd, 2017). These positions are not fixed within midwifery and obstetrics, as both midwives and doctors pursue practice that reflects each of these models, and women, families and the community at large hold beliefs about what it means to give birth and whose 'ways of knowing' about birth take precedence in their lives. The level of 'investment' in the woman's experience – and desire to protect her from conflict during labour – may lie at the heart of midwifery acquiescence to facilitating treatments and interventions that may not be in the best interests of the woman or her baby.

'Keeping it sweet for the woman', because the midwife makes an assumption about the woman and her family privileging the medical point of view, therefore constitutes an opportunity. If midwives are well-informed and can effectively communicate their knowledge to women and their families, *together* they can confidently challenge practice recommendations which are not evidence-based or which pose unacceptable risk of harm in the circumstances. The undeserved historical position of the obstetrician as the only expert can thus be replaced by an effective collaborative process that reflects everyone's expertise. Thus a second generative mechanism, education for supporting birth, could be harnessed to reflect a more equal valuing of women's and midwives' ways of knowing alongside empirical understanding derived from quantitative research methods. Deep understanding by all practitioners associated with birth about what matters to women during their labour care - including how family members can be involved - could inevitably promote ways of supporting labour that are physiology-enhancing.

Socialisation into practice

Midwifery socialisation

The socialisation of practitioners begins with their first encounters in clinical, professional and educational settings, but becomes more embedded once out in the workforce. Once graduate midwives enter practice, either as core midwives or LMCs, they are supported through their first year by participating in a compulsory Midwifery First Year of Practice (MFYP) programme. This programme is designed to support the graduate's transition from a "competent to a confident" midwife (NZCOM, n.d.). One aspect of the programme involves close mentorship with a midwife the graduate has selected herself, who usually does not work in the same practice or clinical setting. The graduate midwife and her mentor meet regularly to discuss practice and to debrief experiences, and the graduate develops goals for her ongoing educational and professional development. The graduate determines her own educational needs and capped funding is provided to meet these over this first year. At the conclusion of this first year of practice, the graduate midwife presents herself for her inaugural Midwifery Standards Review during which she reflects extensively about her practice, her statistics, and the feedback she has received from her mentor, her midwifery and obstetric colleagues and women she had provided midwifery care to. The review panel, which consists of a midwife and a service-user (woman consumer) who have both received practice review education, assist the graduate to identify her ongoing professional development, education and support needs as she moves beyond this closely-supported first year of practice.

The MFYP programme has been in place since 2007, at first as a voluntary programme - when an average of 94% of graduates chose to participate - (Dixon et al., 2015) and more latterly as a compulsory programme. Evidence attests to the programmes' efficacy as both a mechanism for assisting graduates to increase their confidence as practitioners (Pairman et al., 2016) and as an aid to retention of new midwives in the midwifery workforce (Dixon, et al., 2015). This adjunct to the socialisation of midwives enables them to explore practice and decision-making in a supportive one-to-one context, a safe debriefing environment where practice dilemmas and errors of clinical judgement may be talked through without judgement. Constructive conversations that encourage critical thinking provide an opportunity to consider how the graduate might expand her knowledge as necessary or how she might handle a similar clinical situation differently in the future.

My observation in the clinical setting of how new core midwives were socialised into Birthing Suite confirmed this *essence* of quiet encouragement and supportive presence by more experienced midwives. The graduates I spoke with about their experiences on shift mostly reported that they felt free to seek guidance from other midwives, and that if concerns were raised about their decision-making these conversations took place in private, and were mostly seen by the graduates as educative rather than punitive. I did observe however that although at the midwifery handover often the new graduates were asked which women they would like to work with, what frequently occurred was that they were allocated to work with the women who were being prepared for elective caesarean section or for induction of labour. This meant that they rarely had the opportunity work with women in labour who were not in some way complex and therefore having their 'management' directed by the medical staff. So new midwives' ability to consolidate their labour support and decision-making skills was influenced strongly by a medicalised approach which involved the use of multiple interventions, ARM, oxytocin infusions and epidural management. Becoming more proficient at these skills is of course beneficial for new midwives, but this occurs at the expense of improving their proficiency at supporting physiological birth. Many new graduate midwives who enter core (hospital-based) practice do so with an intention to transition to LMC (community-based) practice after a period of 'practice consolidation', but it is possible this increased exposure to interventionist practice may ultimately undermine their confidence to recognise the wide parameters of normal labour progress and erode their willingness to be patient with slowly progressing labour. An anecdote from my field notes recalls

One graduate excitedly discussed the normal birth she had facilitated yesterday, her first since becoming a 'real midwife'. She was so buoyant and thrilled about this experience, and when asked when she had last 'caught a baby', she said it was seven months previously, while she was still a student (*from field notes*).

Community-based Lead Maternity Care graduates are similarly socialised by their practice partners as they develop their practice confidence. Usually an experienced midwife from the practice will accompany the graduate (with the woman's consent) at her first few births after registration if the graduate had indicated that this would be helpful for her. As well as this, practice partners will make themselves available for phone conversations, and the MFYP programme also provides for Midwifery Practice Support – a funded opportunity for the graduate to seek 'in-person' support from

another midwife to see her through clinical situations that she would like additional support with such as perineal repairs or assisted births. Practice meetings provide further supportive contexts for debriefing, sharing stories and working through clinical dilemmas.

But if they are not yet 'trusted' by their medical colleagues their practice is closely scrutinised and, as previously identified, their ability to advocate for women and to maintain a watchful waiting presence during slow labour are compromised.

Medical socialisation

Observation of the socialisation and knowledge development of junior doctors in the Birthing Suite was seen to play out in strongly 'hierarchied' and public ways, that appeared at first to be intimidating for the newer practitioners, indeed sometimes even humiliating for them. Early on in my period of observation I (and several other people in the office) witnessed a registrar and house officer quizzing an intern about the risks associated with severe hypertension in pregnancy. The intern appeared increasingly flustered as question after question was snapped at her, with little time for her to compose her response. I perceived that she was embarrassed, as she was unable to come up with the answer the registrar wanted. She hesitantly ventured "seizures?" but the registrar quickly corrected her and said "No, stroke". I later reflected on this encounter:

I'm sure this was really embarrassing for the TI – and it made me think about the way that midwives assess student/graduate understanding, and my previous experiences of observing doctors' interactions with their 'subordinates'. It usually seems pretty unforgiving, relentless and unsupportive compared with how midwives interact with student midwives. Is this part of cultural nuance as well? Is the ability to spout correct answers to snappy demands valued in medicine? Does the focus on needing to 'prove oneself' translate to overkill in the treatment sphere (*from reflective journal*).

After thinking about this and observing a similar pattern from the more senior doctors during the medical handovers, I asked one of the registrars about how it felt to be quizzed in this manner. After people left the handover, I said "gosh, these handovers are pretty busy aren't they, does it feel okay to be quizzed like that in front of so many people?" and he responded "it's just what we do, we all offer our thoughts, it's how

people learn” (*from field notes*). This response indicated to me an acceptance that this was ‘normal’ within medical culture. Several midwives told me that the registrars are often intimidated by and afraid of their consultants and that they are sometimes berated in front of colleagues and labouring women by them.

A third generative mechanism is thus identified: the socialisation of midwives and doctors contributes to the ways they interact with one another and with the women in their care. By focussing attention on improving relationships, and sharing supportive strategies to assist practice and knowledge development, the hierarchies that perpetuate an us-and-them culture can be replaced by a more egalitarian construct that collectively enables rather than constrains stretching one’s metaphorical practice wings whichever discipline people practice within.

Serving the needs of the birthing woman or the institution?

Applying a critical lens to ethnographic observation is ‘gold’ for reflecting on who’s interests are best served by maintaining the status quo (Thomas, 1993). From the physical layout which ‘centres’ the caesarean section theatre so that it is equidistant from the birthing rooms, to the daily rhythms of shifts which can dictate care, it is difficult to see how the birthing suite is configured to best serve the needs of women giving birth for the first time. Birth works best when women are in optimal environments; dimly lit spaces with minimal neocortical stimulation, a feeling of safety and the nurturing presence of trusted support people and known health professionals which optimises the hormonal orchestration associated with the balanced release of endogenous oxytocin, cortisol and adrenaline (Dixon, Skinner & Foureur, 2013a). Although it is possible to create such spaces within the birthing suite environs, the ‘birth factory feel’ threatens to overwhelm even the most well-meaning people within it.

A finite number of rooms means that women cannot “just hang out” (*Sarah, core midwife*) while their labour finds its rhythm, usually cannot choose which room they wish to labour and give birth in, and their family members feel awkward in the alien space so cannot feel at home here either. The concrete floors and fluorescent lights create physical discomfort for both visitors and staff, and the drive to always be “emptying the Board” (*Sarah, core midwife*) quickens the pace in a pervasive way. For pragmatic reasons, the daily medical rounds, handovers, meal breaks, cleaning requirements and so on, all impinge on a woman’s ability to just ‘be’ in her space, in this place. There’s a momentum associated with the birthing suite that is “always

moving forward” (*Margie, core midwife*). A mechanistic feel, reminiscent of a factory floor.

The industrialisation of birth

The industrialisation of birth which occurred progressively across the 20th century uplifted birth from being a family and community event which took place in peoples’ homes or on the marae and set it down in institutions where birthing women became ‘clinical fodder’ for student doctors and midwives (Tracy & Grigg, 2019). Popular rhetoric was that the driver for this change was to reduce the maternal and infant mortality rate of the country. In fact, much more was happening in the wider social sphere that contributed to the centralisation of birth into these ‘birth factories’ (de Souza, 2013).

Perinatal mortality rates were indeed high in the early part of the twentieth century, and the professionalization of midwifery was one strategy to address this issue. By regulating the practice of midwifery, the formal education of midwives meant they could not only improve the safety of birth, but they could also act as agents of the state in the lives of mothers (de Souza, 2013). The practice of lay midwifery, and for Māori the common practice of whānau and tohunga support at birth, were effectively criminalised, reducing women’s choices and undermining the mana of established cultural birthing practices. Rather than acknowledging the contribution that poverty, racism and classism had on the wellbeing of children, bringing mothers under the control of the state in terms of their reproductive capacity provided a means to absolve the State of its responsibility for the high mortality problem (de Souza, 2013).

The rise of mechanisation in industry across the century saw the factory floor flourish as the centre of production. Factors which improved efficiency in the productive sector such as “timing, regularity and scheduling were applied to motherhood and parenting (the re-productive sector) and in turn women’s roles were geared towards producing adults for the factory” (de Souza, 2013, p. 16). The strict scheduling of a baby’s daily activities in four hourly cycles of sleep, feeding, bathing and so on (The Plunket Clock) was popularised in a publication by asylum Superintendent Sir Truby King titled *Feeding and Care of Baby* (1913, p.35) which regimented baby care for several decades!

Dykes (2005) describes how under industrialisation, childbirth medicalisation was inevitable, where “maternal labour is a production process, the woman is the labourer, her uterus is the machine, her baby is the product and the doctor is the factory

supervisor” (p. 2285). The midwife therefore becomes a factory floor worker whose job it is to follow the supervisor’s instructions (Kirkham, cited in De Souza, 2013). De Souza (2013) argues that knowledge derived from family and community networks is, in this context, not seen as credible or legitimate because the maternity system is positioned as the “bearer of expert knowledge” (p. 16).

The efficiency of productive systems relies on everyone playing their part to ensure a smooth process, using the available tools at hand to get the job done. The increasing use of technological solutions to the problems of inefficient systems within the productive sector was mirrored by advancements in pharmacology and surgery which carried the potential to improve efficiency in the reproductive sector. A ‘production line orthodoxy’ (Walsh, 2006) became increasingly apparent in the organisation of maternity care, where inefficiency (labour dystocia) was not tolerated and the practice of active management, dressed up as being beneficial for both labouring women and babies, became a valued approach to streamlining birth.

An anecdote from the observation period during this study illustrates this point well. A consultant was discussing with me the benefits of performing an ARM followed closely by administration of oxytocin, rather than waiting to see if the ARM in isolation would produce a more ‘efficient’ labour. I had wondered aloud whether a four-hour waiting period following ARM might reduce the need for oxytocin administration, given that the audit findings had noted a high incidence of hyperstimulation which in many cases had resulted in caesarean section for fetal distress. She told me there was “proof” that rapid administration of oxytocin reduced the caesarean section risk, and that this practice was “better for women because it meant a shorter labour” (*from field notes*) thus prioritising the efficiency of a faster augmentation-to-birth interval over the avoidance of medical interventions, and positioning this as being in women’s interests.

Resourcing normal birth – running a health service

Some of the midwives in this study discussed how decision-making about what resources are available does not take place ‘on the floor’ but rather ‘up there’ where the District Health Board accountants and managers are required to account for every dollar spent. How many rooms there are in Birthing Suite is determined in part by demographic projections that, in this institution’s case, proved to be an under-estimate of the size of the birthing population, and in part by how much floor space is available as a finite resource. As alluded to previously, the availability of resources to support physiological birth was an issue for some of the LMC midwives:

Delilah: you have to bring your own sonicaid, if you want to use one

Fern: yeah, it's hopeless

Gia: yes, you can't find a thing there

Fern: yeah, there's no sonicaids

Gia: and I don't know if that's a purposeful thing that they've done, but that annoys the hell out of me

Delilah: and one of the core midwives said 'oh, just use the CTG intermittently' and it's like 'nah, I don't think so'

Gia: no!

Delilah: nah, I'll go back to my car and get my own gear thanks, I've done that before

Suzanne: so, do you see that as a barrier to normal birth?

Gia; yes

Fern: yes

Delilah: yeah, absolutely it is

Suzanne: that... inaccessibility of the equipment to support normal birth

Willa; and actually, in that [normal birth] room, all the good birthing equipment is stored in there, rather than sprinkled around all the rooms, so...having to hunt for swiss balls and floor pads and that kind of stuff, it really irks me (*excerpt from focus group two*)

Although intermittent auscultation is sanctioned in this institution for monitoring the fetal heart rate in well women with uncomplicated pregnancies, the LMC midwives described not being able to find a hand-held doppler device to use and were encouraged to use the cardiotocograph machine. Gia even intimated that this was in some way a 'purposeful thing' – in order that the CTG machine would be used, as this is considered a preferable way to monitor the baby by most medical staff. The artefacts of technological birth are easy to locate and plentiful. The few artefacts that support physiological birth, apart from baths that are in each room, (for example the swiss ball,

rebozo, the birthing couch, soft mats for the floor and so on), are mostly located in one room and are therefore less easily accessible, or indeed may be unavailable if this room is already occupied.

Birthing Suite is a site of care within a health service. Within a business model, if a service provides poor customer outcomes, and receives poor feedback, this is a catalyst for change. Complaints generate improvements. In maternity care, it appears that the opposite is true. When women dare to speak about what they need (e.g. write a birthplan) and demand their right to give birth without feeling disrespected and violated, this is derided. Far from initiating positive change, poor service in the maternity context serves only to oppress women further.

Resourcing midwifery continuity

An important component of birth care known to improve women's experience and birth outcomes is the provision of continuity of care (Sandall, et al., 2016). This refers to the continuous support of a known midwife and her back-up throughout the childbearing period (NZCOM, n.d.). For women experiencing long labours, the ability of her midwife to remain present and provide safe decision-making may be compromised, and the availability of a back-up midwife therefore enables continuous support throughout labour reflecting a seamless transition for the woman, both in terms of her clinical and emotional support, but also in terms of the philosophical alignment of her midwives. At the time this study was undertaken, the ability to pay the relieving midwife relied on the generosity of the primary midwife sharing her birth fee with the second midwife.

Although the fee for labour and birth represents the bulk of all the funding a midwife receives for a woman's entire maternity experience, this fee is considered by practitioners to be an inadequate recompense for the extended hours often associated with augmented labours. Increasingly midwives respond to this situation by 'handing over' the clinical care of women whose labours become complex (for example, those that include epidural and oxytocin administration which are considered secondary rather than primary care) to the obstetric team and core midwifery staff. This is in part a political gesture, to draw attention to the chronic underfunding of the primary maternity sector. The unfortunate side effects of handing over care in this way are disruption to the continuity of care the woman experiences, and the increased workload arising for the already-stretched core midwifery workforce. Funding constraints therefore represent a further structural aspect of an industrial generative mechanism that may add conjuncturally to the increased use of augmentation procedures. If LMC midwives were better resourced to provide true continuity of care, in turn supporting a

physiology-enabling birthing environment, this has the potential to contribute to improved outcomes for women and babies.

Being valued as a midwife

A further structural issue within the tertiary setting involves feeling valued as an important component of work satisfaction. Midwives described feeling under-valued in this work setting. This was usually expressed in terms of their midwifery knowledge being undervalued by medical practitioners. But on a more pragmatic level, several midwives also expressed frustration that their medical colleagues 'had it sweet' in ways they did not.

Core midwives in Birthing Suite are required to account for every minute of their shift, by completing a web-based work-tracking database that captures how they spend their time. The managerial rationale for collecting this information is to document (make visible) the work of midwives, to provide evidence for staffing allocation, acuity management and so on. Midwives do not value this process highly – completing the data input eats into the time they would prefer to be spending supporting women in labour, or assisting them with breastfeeding, or indeed it can erode their own personal time when this data input occurs after their shift has ended. Sometimes the midwifery shift coordinators assist with data input so that core midwives remain free to actually accomplish their clinical duties. Several midwives told me that although they had been diligently providing this 'evidence' of their work, they had not seen any measurable benefits in terms of staffing levels improving. Many felt irked that the doctors are not also required to account for their time in this way.

Core midwives described other 'unfairnesses' they perceived in relation to the relative valuing of their worth compared to their medical colleagues. Doctors have their lunches paid for, whilst midwives are "lucky to get a lunch break at all" (*from field notes*). Doctors at registrar level have elective education funded to the tune of \$27 000 per year, while midwives have to self-fund their continuing education unless it is provided by the DHB or is part of a recognised postgraduate qualification pathway. Midwives who are on shift at night are expected to work for the duration of their shift, whereas registrars are provided with a bedroom so that they can sleep if they are not currently attending a woman. These differences in expectations are no doubt embedded within long-standing cultures related to perceived professional status.

As previously outlined, at the time of this study midwives across the country were engaged in a very public campaign to improve their remuneration for both community-

based, and hospital-based practice. A long history of under-funding (and, as midwives saw it, under-valuing) of midwifery care had culminated in a 'perfect storm' of protest action, midwives leaving the profession "in droves" and concomitant increased stress and tension within the workforce (Preston & Wiggins, 2017; Stewart, 2017). Reduced staffing meant many core midwives were working increased hours, doing overtime and staying beyond their allocated shift hours to complete administrative requirements relating to their work. As well as this, LMC midwives were frequently booking higher than their usual number of women because there were fewer LMCs to cover the number of women who requested LMC care. Some LMC midwives intimated that they booked fewer primiparous women, because they were "stretched" anyway and "first timers take so much more time" (*from field notes*) and the funding mechanism does not meaningfully acknowledge this. The core midwives often talked about "invisible babies" (*field notes*) – this was a reference to the fact that staffing was allocated on the basis of how many women ('patients') were occupying beds in the clinical areas, when in fact much of the time the midwife was actually caring for two people – the woman *and* her baby.

Feeling under-valued diminished the midwives' enjoyment of their work because they felt "too busy to care" (*field notes*). Doctors, both in their individual interviews and their group discussion, acknowledged that midwives were underpaid and said it was unreasonable to expect midwives to provide care in early labour. They felt that it was acceptable for the LMC to direct the woman to come to birthing suite to be "morphined" and for the LMC to be called once the woman's labour had established. For some midwives, this sanctioned their abdication of early labour care and increased their expectation that core midwives – already very busy working with women with complex needs – would 'babysit' these women. From Margie's perspective as a core midwife this was certainly the case

Often we see the woman, she comes in and we are told... the LMC would like you to do an examination, and if she's not in established labour, to, you know, look at giving her some morphine... and the thing is, you want.. you know I would prefer that the woman would go home but if she doesn't, you know, the midwife, the LMC, often doesn't want to come in herself... in the middle of the night (*Margie*).

Other midwives took pride in the fact that their early labour home visits supported women's understanding about their birthing body and encouraged their family

members in their efforts to share the woman's care. "Yep, assess at home, definitely a home visit ... really crucially important" (*Gabrielle, LMC, FG1*). Cassey agreed, saying "it is self-protective for the midwife too, if you're keeping your client at home longer, it means you can potentially set her up to do some more hours without needing you there" (*Cassey, LMC, FG1*). In the context of exploring the drivers of high augmentation rates in this hospital, the care provided to women in early labour has a profound effect – admission to hospital once labour was active was protective against the use of augmentation procedures, so this is a definite modifiable mechanism for reducing the inappropriate use of labour augmentation procedures.

The women in the current study described the relationships they enjoyed with their midwives as crucial to their overall experience. Given the amount of store put by these relationships, it is easy to see why some women trusted their midwives' decisions over those of the medical staff they encountered, who they did not *know* and who they assumed were motivated by the desire to perform interventions.

The industrialisation of birth in the 'birth factory' is therefore another generative mechanism in the mix, which in conjunctural alignment with the previously identified mechanisms, leaves our social actors (women, midwives, doctors and managers) with few choices but to fall into line with the orthodoxy of efficient throughput, surveillance and technological control of the birthing process.

Available social discourses – at the nexus of birth

Critical realism asserts that available social discourses or 'knowledge-power' nexi as described by Foucault, (1984) are strongly generative in terms of how social structures are reproduced within open systems, such as the tertiary maternity hospital setting (Cruikshank, 2012; Ussher, 2010). They are described as part of the "connective tissue" that links social structures and the actions of individuals within these structures. Available social discourses about being a 'good doctor', a 'good midwife', or a 'good mother' inevitably collide in the birthroom, as all the trappings of each persona bring their influence to bear.

The 'good' doctor

What makes a 'good doctor' depends on whose perspective is being sought (Paterson, 2013) although some common elements are described across several studies that have examined this phenomenon. In their narrative synthesis which included twenty studies on the matter, Steiner-Hofbauer, Schrank and Holzinger (2018) identified six main domains which characterised the 'good doctor'. These were their general

interpersonal qualities, communication and patient involvement, medical competence, ethics, medical management and their engagement with teaching, research and continuing education. Among their conclusions was that patients put more emphasis on doctors' communication skills, whereas other doctors emphasised medical skills as the most important (p.398). In contrast, Paterson (2013) described that although competence in communication was important, technical competence was at the top of the list for patients. His view is likely coloured by his role as a Health and Disability Commissioner whose role it was to investigate complaints made by consumers of health services. In his opinion, doctor's views of what made a 'good doctor' were the same as patients but he added that doctors also had the added insight of *themselves* being patients, which meant they also included compassion and 'being professional' among key attributes. The insight afforded by being patients themselves may provide a clue into the difficulty that (cis-identified) male doctors sometimes experience 'relating to' women in labour, a situation they could never themselves experience.

Contemporary medical discourse suggests that the "new medicine [which] is putting the patient in charge" (Veach, cited in Paterson, 2013) is eroding historical medical dominance in respect to decision-making, and that this is creating some discomfort for medical practitioners. Both Anna and Dr L, as well as the two registrars discussing how to ensure women make the 'right' choices (as described in Chapter Five), alluded to the difficulty they experienced from having women directing their own care. Being up-to-date, humane and honest, and putting patients first were highly rated also (Kumar, Murugan, Prasad & Devi, 2018; O'Donnabhain & Friedman, 2018). These qualities were also proffered by medical students as being crucial, along with being "connected" and "holistic" (Cuesta-Briand, Auret, Johnson & Playford, 2014) but medical students reported a wide gap between what they were being taught and what they were seeing in practice in relation to the doctor "professional persona". For them, competence also included knowing one's limitations alongside academic knowledge and clinical skills.

Being a 'good doctor' thus involves knowing what to do and how to do it, conveying knowledge and having technical skill, along with a number of desirable personal qualities (humanity, humility, strong moral character, showing respect, involving patients in decision-making). Some of these qualities can be judged by health consumers, but attributes like clinical competence and currency of knowledge must be taken on trust by recipients of care (Paterson, 2013). If a doctor is practicing beyond their limitations, the labouring woman is usually not in a position to know this. None of the studies examining 'good doctoring' discussed practice in the context of *uncertainty*, which arguably features strongly in birth care.

The 'good' midwife

Studies that have theorised what it takes to be a 'good midwife' have similarly identified professional caring, professional wisdom, personal and professional development, interpersonal competence, and professional competence as being crucial (Halldorsdottir & Karlsdottir, 2011), but a number of additional dimensions have also been described which provide further insight into the importance of the relational aspects of midwifery care. Nicholls, Skirton and Webb (2011) who used a Delphi technique including the views of 128 women, 63 midwives and 35 midwifery educators in the UK, acknowledged that individualising care sometimes required midwives to engage in 'deviant behaviour' which was seen as beneficial for women, and 'emotional intelligence' was included as an important interpersonal skill. Women have also identified that 'being there' (Nicholls & Webb, 2006), being 'an immediately available presence', supporting 'embodied limbo' and 'helping to go with the flow' (Borelli, Spiby & Walsh, 2016) were characteristics of the good midwife. From their interviews with fourteen first-time mothers Borelli et. al. described the "kaleidoscope midwife" who is "ever-changing in the light of women's individual needs" who can "create an environment that enables her to move forward despite uncertainty and the expectations/experiences gap" (p. 103).

Midwives' own assessments of what it takes to be a good midwife include being "mentally present and attentive" because this increases women's confidence and improves their chances of a normal birth (Aune, Amundsen & Skaget, 2014). These midwives also stated that what most fostered their own perception of being a good midwife was to be able to provide continuity of care, saying that they felt "inadequate" when they were unable to do this (p. 92). First year student midwives in Australia concurred with these attributes, and added several others: belief in women's ability, belief in natural birth, being dedicated and prepared for personal sacrifice, having cultural knowledge, passion and enthusiasm for advocacy and empowerment (Carolan, 2011). By the time they had reached their final year of study, midwifery students had added being a skilled practitioner who was caring and compassionate and able to work "above and beyond the call of duty" (Carolan, 2013, p. 118).

By examining the available discourses of what it means to be a 'good' practitioner who supports women giving birth, it is clear that the expectation of good performance for midwives encompasses a broader spectrum of behaviours than for doctors. Coupled with technical competence and the ability to communicate well, several other relational attributes involving 'emotion work' (Hunter, 2001) have been identified, indicating that

women and midwives place a high value on this dimension of care. Even the attribute of self-sacrifice is evident in the student midwives' accounts of good midwifery.

The 'good' mother

When we add the social construction of 'good motherhood' into this mix, it becomes unsurprising that acceptance of interventions in order to 'keep everyone safe' and 'move things forward' occurs so readily. Being a 'good mother' has been extensively theorised, from women's own perspectives and the perspectives of psychologists, social workers, feminists and others. The threads that are common throughout these perspectives, are that 'good mothers' are expected to be selfless, to protect their child's well-being and to put their child's needs before their own (Carter, 2009; Chadwick & Foster, 2012; Cowie, 2015; Martin, 2003; Sinai-Glaser, 2016). Ideas about good motherhood are actually based upon what is good for children. Most dominant discourses act to serve the powerful (Foucault, 1977), and so being a 'good mother' serves the needs of men, of capitalism, and of the State, while at the same time women's attempts to meet the ideal of good motherhood have "adverse implications for all mothers" (Cowie, 2015, p. 10) because the expectation to subjugate their own needs means they will accept treatments and interventions that may pose risk of harm.

In this study, Cohen did not want to accept prophylactic antibiotics during labour, with (in her mind) reasonable rationale. She had recently had a course of antibiotics anyway, she linked her own chronic irritable bowel syndrome to early antibiotic exposure in her own infancy, and she was well-informed about the research linking colonisation with vaginal flora as being beneficial for newborns. She acquiesced to the doctor and her partner to further reduce the tiny risk of streptococcal infection for her baby; "I didn't like that, I didn't want to take antibiotics, um, but, because my husband... well, mostly to appease my husband I agreed to it" (Cohen).

Diana was reluctant to accept the recommendation for caesarean section, because she felt she was "almost there", but "...the doctor was trying to encourage me to make the decision to have the c-section and I was... well, I didn't want to do it if I didn't really have to, but at the same time I didn't want to ...risk... you know, something with him [the baby]" (Diana). Diana was describing a tension she experienced between balancing her own desire to keep pursuing a vaginal birth with the possible risk to her unborn baby by not agreeing to the intervention. Bobbie knew to put her baby first even when she was describing feeling violated by her ventouse birth "I felt like we both understood that he [baby] was the main priority, which ... of course, but like, well, I didn't care if I had a side effect of any sort, just get him out safe" (Bobbie). For Steph,

putting others' needs first even extended to not being able to celebrate her positive birth experience for fear of making other women feel bad about their own; she concluded this aspect of our conversation by saying "it's just so typical, such a typical woman thing to feel so bad about something good that's happened" (*Steph*).

Although Mary was left feeling confused about the information she was (not) being given by the doctors

they did say 'we are going to assist', but they didn't say how, and I think the only choice I thought I had at that stage was, is it going to be a c-section? Because I didn't know what they were talking about and it was only afterwards that I understood it was going to be a ventouse ... I was just trusting...and going with the flow, and I've got no...issue with them doing it, at all...you know, she came out, and she's amazing...

she concluded by saying "so... I don't feel like I've got any right to complain about it" (*Mary*).

Another dominant discourse within motherhood is the biomedical model, which restricts and controls women's behaviour even before pregnancy begins, for example by exhorting women to take folic acid, stop drinking and smoking and prepare to create an optimal environment for conception (Cowie, 2015). Carter (2009) claims that within this model, "being a 'good mother' is likely to correspond with being a 'good patient' – one who accepts the idea that doctors and staff are experts at producing healthy childbirth outcomes and complies with their directions" (p. 221). The biomedical model which constructs women's birthing bodies as sites of risk, watches over pregnancy closely but really comes to the fore during birthing. Again, women are 'good' when they accept the advice of experts, even when this diminishes their own experience. Kimberly and Steph shared their feelings about being monitored using cardiotocography, and both women described how they placed the interests of their baby over their own

It's not particularly comfortable, but it was like...they need to make sure that he's ok, and he's more important than me
(*Kimberly*)

I *hated* that machine... it made me really anxious. You know, I think the fact that I could see the monitor was not helpful, because... oh no, the heartbeats gone low, and ... oh I hope it

goes up soon, and uh-oh it's dropped a little bit more, and now it's gone up and ... ugh

Suzanne: that moment-by-moment thing?

Steph: yeah, like I was *paralysed* by the information and I couldn't do anything about it, yeah, I really didn't like it (*Steph*).

My journal contained a tongue-in-cheek reflection about various constructions of 'goodness' based on what I observed and heard.

LMCs are 'good' when: they keep everyone informed, they come in early, they use midwifery skills not epidurals, they don't ask for help, they don't hand over, they can be trusted

Core midwives are 'good' when: they offer to help out, they don't gossip about women/other staff/LMCs, they 'have your back'

Doctors are 'good' when: they butt out, they respect midwifery opinions, they are kind to women, they knock and wait

Women are 'good' when: they don't come in too early, they are quiet, they comply, give birth quickly and leave (*notes from reflective journal*).

These characterisations of 'goodness' contain inherent tensions – if being a good LMC midwife involves 'not asking for help' because the core and medical staff are too busy, this is antithetical to their ethical and professional responsibility to seek assistance when at the margins of their expertise. Gabrielle certainly perceived that this created an environment of unsafety

...that is classic...classic Birthing Suite "oh – don't come out here and tell me anything bad...look how many Caesars we have got to do' which is really difficult actually, if you need some support, and you have a concern about a labour 'we don't want to hear it' 'we don't want to know' I've been told that. (*Gabrielle, LMC, FG1*)

The things that midwives and doctors appreciated about their environment, what makes it 'good', were effective collaboration and being highly efficient when an emergency occurs.

... it was a cord prolapse, and it was...my god... just so smooth... everybody was called, and everybody was just (*clicks fingers*) just there, and you know... it was like a well-oiled machine, really slick, and it's just a joy to watch when that happens. And everybody knows their job really well, and supports each other really well in that role... but you know, at the other end, I don't think we're that supportive... (*Sarah, core midwife*)

It is no small irony that the very thing that makes being in the tertiary hospital the perfect place to be when a crisis occurs “– if you have an emergency, this place is shit hot. Absolutely shit hot” (*Sarah, core midwife*) is also what makes it the least preferred environment for supporting a physiological birth experience. Quiet ‘presence’ in the context of high surveillance, risk aversion, ‘poised-ness’ for action and anticipation of abnormality requires the ‘nested bubble’ of the woman, her family and her LMC midwife to set up a “mental lock” on the door (*Willa, LMC, FG2*) to protect the woman’s space. But this protected space comes with no sense of confidence that the perimeter will not be breached by a metaphysical or physical intrusion of the ‘need to know what’s going on’ from outside spectators.

Summary

This chapter has identified several generative mechanisms that, depending on how they align, hold promise for creating an optimal situation for well women experiencing first birth within the tertiary maternity setting. Women, families, midwives, doctors and institutional managers are all social actors who can make positive individual choices about how they actualise the tendencies associated with these mechanisms. In Chapter Nine I briefly reprise the findings across the empirical, actual and real domains and discuss them in light of current understanding from the literature. Finally, I synthesise the findings to demonstrate how the generative mechanisms interact to give rise to the ‘bigger picture’ of attempting to keep birth normal in a context where intervention is the norm.

Chapter Nine – Discussion

Introduction

This research aimed to explore how the tertiary maternity environment influences the experiences and outcomes of well women giving birth for the first time in relation to the augmentation of labour. I undertook an ethnographic examination of the cultural milieu of the tertiary birthing suite, in the hope that understanding this culture better might illuminate why so many women giving birth there experience medical intervention, despite a well-embedded midwifery-led continuity of care model. Identifying factors that generate interventionist practice can lead to opportunities to improve conditions so that women are better supported to achieve physiological birth in this setting. In this chapter the findings from within each level of the analytical structure are contextualised within literature from the corpus relevant to each. Congruent ideas help to confirm the current situation, but novel or discrepant findings can assist us to ‘move things forward’ by stimulating new questions and therefore enable us to forge a brighter future.

The Empirical Level – what is readily seen

Augmentation is common, and associated with adverse outcomes

The initial quantitative component of the research scoped out the magnitude of the problem in relation to labour augmentation and revealed that sixty percent of the women who could have reasonably anticipated a normal labour trajectory were augmented with either artificial rupture of membranes, or oxytocin infusion or both. In one third of documented cases, the interventions were applied in contravention of the institution’s clinical guidance. This snapshot of practice confirmed that deeper exploration of the conditions under which this happens was warranted. These findings also demonstrated that home visiting in early labour mitigated against early admission to hospital and that admission in more advanced labour reduced the chance of labour augmentation. For women, labour augmentation was associated with increased use of pharmacological pain management techniques, postpartum haemorrhage, and caesarean section. For the babies, there was an increased chance of tachysystole and hyperstimulation, and they were less likely to breastfeed or experience skin-to-skin in the first hour of life due to the association with assisted and surgical birth.

These findings are generally consistent with studies that have examined outcomes associated with labour augmentation. Commencement of oxytocin infusion without documented indication occurred in approximately a third of cases reported here, which

is less than reported elsewhere; 42.5% in Bernitz et al., (2014) and 57% in Selin, et al., (2009). In these two studies the overall augmentation rate for first-time mothers was lower in Bernitz et al., (2014) reporting 43.8%, but higher in Selin et al., (2009) at 72.8%, the latter suggesting a very permissive use of oxytocin augmentation despite active management not being the expected policy in this Swedish hospital.

This study demonstrated a threefold increase (OR 3.04, 95% CI 1.69-5.45) in the rate of postpartum haemorrhage (> 500mL) for women augmented with an oxytocin infusion compared with those who were not augmented; a significant finding ($p=0.003$). The odds of experiencing a severe postpartum haemorrhage (>1000mL) were more than doubled (OR 2.8, 95% CI 0.91-8.73) however this was not statistically significant ($p=0.07$). This contrasts with the findings of Belghiti et al., (2011), (aOR 1.8, 95% CI 1.3 to 2.6), and Sheiner et al., (2005) (OR 1.4, 95% CI 1.2–1.7) both of which were significant in relation to severe postpartum haemorrhage. It is possible that the sample size variation across these studies accounts for these differences because the confidence intervals were wide due to the very small numbers in this study.

The finding of an association between oxytocin administration and a significant increase in the rate of emergency caesarean section (OR 6.58, 95% CI 3.13-13.85) echoes those of several other studies (Bernitz et al., 2014; Bugg et al., 2006; Oscarsson et al., 2006; Selin et al., 2009; Svardby et al., 2007). It is difficult to interpret this finding because of the known confounders of epidural use alongside augmentation, and other conditions that might precipitate this outcome, such as fetal distress, malposition or obstructed labour.

Although also occurring without oxytocin augmentation, tachysystole and hyperstimulation were both significantly associated with oxytocin use in labour. Tachysystole is commonly associated with oxytocin use (Kunz et al., 2013; Heuser et al., 2013) but some authors have concluded that this does not necessarily lead to adverse neonatal outcomes, such as hypoxia or low five-minute Apgar scores (Boffil et al., 2017). Hyperstimulation, on the other hand, is known to adversely affect fetal status with increased oxygen desaturation and non-reassuring heartrate patterns found when compared with normal uterine activity (Simpson & James, 2008).

Outcomes for the interviewed women

Nine women who experienced long labours storied how their first births at this hospital unfolded in semi-structured interviews with me. Their stories revealed insights about how the hospital environment both aided and hindered their labour progress. These

women understood the potential for first labour to be long and painful and felt well-prepared to meet this challenge. Three women 'got through' without interventions and achieved a normal birth. Of the other six who all had an epidural, four were also augmented with oxytocin – one had an assisted birth and the remaining five a caesarean section. In this respect the outcomes of these few women reflected a microcosm of the larger sample in terms of the associations between augmentation, epidural anaesthesia and assisted and surgical birth. Among the interviewed women who experienced interventions, some felt pressured to accept these by either family members or medical staff, but all agreed that they were offered choices in relation to their care, and that their relationships with their midwives were crucial to their emotional well-being in the context of birth events they did not anticipate. The women expected their midwives to advocate on their behalf, and they sometimes trusted their midwives' clinical judgements over those of the medical staff they encountered.

Women's experience of early labour

The notion described by some core midwives and doctors in this study that women's expectations for first birth are unrealistic and that they therefore experience disappointment (or even depression) when these expectations are not met has been extensively researched. Shub, Williamson, Saunders and McCarthy (2012) studied a cohort of 195 first time mothers prior to giving birth in a tertiary hospital in Australia. These women believed that 56.2% of first-time mothers would experience an uncomplicated birth, and that 30.7% would experience an uncomplicated birth with no sutures for perineal lacerations, when at the time outcome data for that hospital showed that 21% and 8% respectively were the actual frequencies of these outcomes. They therefore concluded that women had highly unrealistic expectations about normal birth and described obstetric staff (obstetricians and midwives collectively) as having "more realistic expectations" (37.9 and 18.7% respectively). They suggested that antenatal education did not improve the accuracy of women's expectations about uncomplicated birth. I contend that clinicians' low expectations in this regard are part of the problem rather than part of the solution, because an increased expectation of intervention in birth creates a permissive culture for use of interventions such as oxytocin augmentation in the absence of clinical need. Nystedt and Hildingsson (2014) reported that 28 percent of women received augmentation with no indication and Bernitz et al. (2014) similarly reported that 42 percent of women in their study received oxytocin with no labour dystocia evident. The current study reported a 32 percent frequency of augmentation techniques that were not indicated according to the available clinical guidance.

With respect to whether women's unmet expectations for normal birth lead to increased depression and feelings of distress the evidence is conflicting, and some of it is now quite dated. In 1990 O'Neill, Murphy and Greene reported a "definite association" between postnatal depression and operative/surgical birth in their comparative study of 28 women who scored positively for depression using the Edinburgh Postnatal Depression Scale at six weeks postpartum, when compared with 28 women who scored negatively, but they did not attempt to link this finding to antenatal expectations for birth. More recently, Ayers and Pickering (2005) found that expectations were associated with actual experience of birth but that correlations were low. Nulliparous women's expectations were in some respects more accurate than for multiparous women (staff control over pain, efficacy of analgesia), but they experienced more obstetric interventions than anticipated and more frequently appraised birth as traumatic and challenging. However, once trait anxiety was controlled for, all significant differences disappeared suggesting that anxiety alone may account for differences between expectations and experiences and that more focussed attention on reducing women's anxiety could positively influence both physical and psychological outcomes for women. Hauck, Fenwick, Downie and Butt (2007) reported increased risk for postpartum depression when women's unrealistic expectations had led to decreased birth satisfaction in their study, which aimed to determine the childbirth expectations and influences on these of twenty Western Australian women.

Numerous studies have examined antenatal expectations for birth in relation to postpartum assessment of satisfaction with the birth process (Ford & Ayers, 2009; Lavender, Walkinshaw & Walton, 1999; Maggioni, Margola & Filippi, 2006; Waldenstrom, Hildingsson, Rubertsson & Radestad, 2004). These studies generally conclude that congruence between expectations for birth and actual birth events is strongly associated with positive assessment of birth satisfaction, regardless of actual birth outcome, suggesting that women are accepting of intervention when they have experienced a high level of control. This includes participation in decision-making and feeling they have been cared for respectfully, as is resonant with the reflections of the women in this current study. In contrast, Fair and Morrison (2012) found that antenatal expectations had no significant effect on birth satisfaction, rather they concluded that *experienced control* during the actual birth event was the only significant predictor of birth satisfaction.

Women occasionally experience uncertainty when deciding whether the sensations they are experiencing constitute the onset of labour (as JC did), but studies that have examined how women experience and respond to the onset of labour report a variety

of experiences. The eighteen women (including six first time mothers) interviewed in Dixon, Skinner and Foureur's (2013b) study all "clearly and easily identified the onset of labour" (p. 12) and they later sought more information and support from their midwives. A metasynthesis of eleven studies which aimed to explore first time mothers' experiences of early labour (Eri, Bondas, Gross, Janssen & Greene, 2016) revealed a high level of congruence between their synthesised findings and the experiences described by the women in this study, with the notable exception of women's uncertainty about diagnosing the onset of labour. The eleven included studies were conducted in high resource countries (United Kingdom, United States of America and Scandinavia) and included 231 nulliparous women who were planning birth in hospital in non-continuity-of-care models. Five emergent core concepts were described which reflected many of the same concepts discussed by this study's participants. These concepts included recognising labour onset, managing at home, the sense of surprise when imagined and actual experiences of the sensations of early labour did not match, making contact with carers, negotiating getting to and remaining at hospital, being there 'too early', being believed and the importance of relationships with both family and professional carers. Other themes were clearly linked to the context of the included studies' models of maternity care and thus do not closely reflect the experiences of the women in this study, for example dissatisfaction about not 'being seen as an individual'. In this theme the women described a 'one size fits all' approach to how midwifery staff counselled them about managing early labour and felt that their individual circumstances were not taken into account.

The women in the present study were known to their caregivers and had experienced continuity of care throughout their pregnancies, so it is unsurprising that this finding was not apparent in the stories of my participants. This attests to another important benefit of continuity of care. Individualised assessment and prior knowledge of women's circumstances, even in situations where the back-up midwife was involved in the early labour care, appears to be protective of women's emotional well-being.

A more recent systematic review also examined women's experiences of early labour (Beake et al., 2018) but additionally sought to include the perspectives of midwives, obstetricians, family doctors (GPs) and labour companions about early labour care. This review included the same eleven studies as Eri et al. (2014) and an additional ten studies from similarly resourced countries - United Kingdom (6), Ireland (1), New Zealand (1), Italy (1) and Scandinavia (1), comprising a total of 478 women, 263 men and 117 health professionals. The births mostly occurred in hospital but some homebirths and midwifery-led unit (primary) births were included. Many of the findings

of Eri et al.'s (2014) metasynthesis were predictably echoed in the review. Additional findings related to health professional perspectives including the need for clear communication with women about what to expect and strategies for managing early labour both outside the hospital and when early admission had occurred. The inclusion of vaginal examination as part of early labour assessment was considered important by some women and midwives despite guidelines generally not encouraging use of this invasive and potentially uncomfortable assessment tool at this time. Women also described feeling 'deflated' and sad if this assessment revealed poorer labour progress than they had anticipated, and women reported feeling unwelcome when admitted to the hospital while awaiting established labour. A further novel finding in the systematic review was women's increased use of technology (phone applications, for example) to support early labour management and how this might impact on women's enthusiasm for remaining at home or presenting to hospital. In the present study, the only woman who had discussed using the internet to assist with her 'diagnosis' and self-management of early labour was JC, whose LMC was a private obstetrician. JC preferred not to "bother" (JC) her obstetrician because it was the weekend. This reflected a less accessible relationship than the other women described having with their midwife LMCs, as they had called without hesitation to talk about their labours even during the middle of the night.

The relationship between the interviewed women and their LMCs featured strongly in their recollections about what had supported them the most while in labour. The word 'gutted' (*Steph*) was used to describe the feeling associated with the LMC's potential or real unavailability. 'Enormous relief' accompanied her availability (*Diana*). Midwives made 'all the difference' to the women's experience. Continuity of care was a major factor – "she knew me, knew what I wanted, we'd talked about it antenatally, she knew how to work with my family, she knew where I would and wouldn't be touched, she had my back, she spoke on my behalf, she 'got' me, she 'saw' me, she didn't judge me, she didn't tell me off for being a sook, she held me, she told stories that inspired me, she guided my thinking without telling me what to do, I trusted her" – these are some of the unsolicited ways the women collectively described why their midwife was so important to them.

The difficulty expressed by the interviewed women in regard to their journeys to the labour room have not been described elsewhere, although Eri et al.'s (2015) study contained a reference to women being "praised for coming in late" and feeling like "going through early labour at home was like a test they had to pass in order to be admitted to the labour ward" (p. e64). The feeling of needing to 'pass a test' in order to

be admitted to hospital in this study is perhaps an unintended consequence of an institutional attempt to promote safety by protecting the birthing suite environment.

Several studies have established connections between the design of spaces for healthcare delivery and neurophysiological functioning (Stichler & Hamilton 2008; Ulrich & Barach, 2006) and in particular the ways that birthspace design can enhance or inhibit the opportunities for physiological birthing (Davis & Walker, 2010; Hodnett, Stremmler, Weston and McKeever, 2009; Lepori, Foureur & Hastie, 2008). The BUDSET (Birth Unit Design Spatial Evaluation Tool) was developed to enable assessment of the design of birthing spaces against four domains: The Fear Cascade, Facility Characteristics, Aesthetic Aspects of the Unit and Essential Support Elements for Women and their Families (Foureur, Leap, Davis, Forbes & Homer, 2010). The first domain items are significant in terms of women's experience of arrival at the hospital and include optimal conditions such as a well-lit and separate entrance to the birthing unit, with clear directions and a short route to the birthrooms. A sense of being welcome, privacy and protection are also desirable attributes. At the study site, the need to 'get past' a security orderly to gain access to the Birthing Suite is one aspect of the provision of a safe space for birthing. While the safety concerns are reasonable and designed to keep women and their families safe, it appears that for some women this is perceived as creating a barrier to seamless access to the birthing area.

Studies examining the relationship between early labour admission and birth outcome have concluded that there is a clear association between admission in latent labour and increased use of obstetric intervention and caesarean section. (Holmes, Oppenheimer & Wen, 2001; Kaufman, Souter, Katon & Sitkov, 2016; Jackson, Lang, Ecker, Swartz & Heeren, 2003; Rahnama, Ziaei, & Faghihzadeh, 2006). This was reflected in the current study's chart review findings, where the women who were admitted prior to 'established' labour were twice as likely to have a caesarean section than those admitted once labour was more advanced. The midwives and doctors in this study discussed a wide range of supportive measures they used to assist women to manage the early hours of their labours, and importantly this included keeping women out of hospital as long as possible by addressing their basic physiological and emotional needs and encouraging the efforts of family members to meet these needs also.

The Actual Level – what is known but not always seen

The actual level data lifted the veil on what is known but cannot always be seen. Midwives and doctors shared their perceptions about how the tertiary hospital setting

influenced their practice (and the care women receive) during the interviews, focus groups and informal conversations with them while I was present in their midst in Birthing Suite. Most midwives felt strongly that the ambience of Birthing Suite is one of a pressured and relentlessly-moving-forward momentum. They felt frustrated when Birthing Suite was occupied by women who were not in active labour, because this placed pressure on beds and contributed to the sense of 'hurry' to get women through. The 'emergency department feel' and constant surveillance of medicine discomforted midwives and they felt there was a strong underlying lack of belief from medical staff in first-time mothers' ability to give birth without assistance. When midwives tried to advocate for the women in their care, they frequently described being 'thrown under the bus' by their medical colleagues and felt that their midwifery knowledge was undervalued by medicine. Over time, for some this eroded their resilience, and resulted in a tendency for them to acquiesce to medical demands in order to protect the woman from discord in the labour room.

Apart from one comment from one doctor, generally doctors' impressions were that Birthing Suite was busy but that this did not affect the care they offered or their decision-making around the augmentation of labour. The absolute consistency of their narrative about this made me internally question whether they had been schooled to cling to this story if questioned by me, because what I saw during my observation period was so at odds with what they were telling me. I observed just one or two exceptions where an oxytocin infusion was averted, with a look in my direction to make sure I had noticed!

The actual level findings surfaced some of the seen and unseen influences that feed into the energy for 'moving things forward' in the busy obstetric unit, and which may manifest in the empirical findings relating to labour augmentation highlighted in the empirical level data. Some of these influences are people-related, and some space-related, but they coalesce in ways that serve to potentially undermine the smooth unfolding of women's labour trajectories by disturbing or disrupting her birthing environment.

Subcultures of birthing: Believing in physiology, believing in technology

The women who participated in this study, as well as the midwives and doctors who work within the Birthing Suite described some ways that their environment influenced their experiences. The evidence is clear that birthing environments that support the physiology of labour can achieve the best outcomes both in terms of the well-being of women and babies and the work satisfaction of clinicians (Cramer & Hunter, 2019;

Hammond, Foureur & Homer, 2014; O'Connell & Downe, 2009). Physiology-enabling spaces are characterised by low-stimulus surroundings; quietness, dim lighting, stillness, warmth, comfort, invited touch, freedom of movement and the presence of natural imagery and artefacts. These environmental conditions promote endogenous oxytocin production and a feeling of safety and protection for the labouring woman. Whilst striving to achieve this supportive ambience in individual birthrooms, the tertiary maternity setting tends to be characterised by busy-ness, activity, lights, constant sensory stimulation from the sound of footsteps outside the door, emergency bells, electronic fetal monitors, moving beds and trolleys in the corridors and so on. This can create a heightened sense of vigilance for the woman in labour, and the constant neocortical 'engagement' required to navigate this environment can disrupt her physiological flow (Odent, 2014).

Enabling physiology

Labour onset and progress is a finely-tuned orchestration of hormonal, emotional and mechanical conditions that are now reasonably well understood, with some finer points such as the role of beta-endorphin derivatives remaining unclear (Baddock, 2019; Buckley, 2015; Dixon, Skinner & Foureur 2013a; Odent, 2015). Far from being 'staged' as labour is traditionally viewed, the physiology of pregnancy, labour, birth and early motherhood is continuous, with processes of inhibition and stimulation occurring in response to an inter-connected ebb and flow of emotions and hormones (Dixon et al., 2013a). Myometrial activation precedes cervical ripening, which precedes the initiation of contractions, and all these processes are mediated by regulation of the main reproductive hormones - oestrogen, progesterone, prostaglandins, oxytocin, nitric oxide and relaxin (Baddock, 2019).

A model linking this hormonal and emotional orchestration was proposed by Dixon et al., (2013a). Women's emotional experiences during labour are linked in a probably-reciprocal cause-and-effect relationship alongside the known hormonal cascades of labour. While acknowledging labour as a 'stressful' experience in terms of the necessary production of corticotrophic hormones, optimal labour-promoting hormonal functioning is achieved when neocortical stimulation is kept to a minimum (Buckley, 2015; Odent, 2015).

The presence of pain, fear and anxiety – all normal maternal responses to experiencing the sensations of labour – can disrupt the 'oxytocin system' (Foureur, 2008) so necessary for the progressive continuation of labour. Increased production of catecholamines can lead to inhibition of oxytocin release which can produce uterine

inertia (and ultimately labour dystocia), and vasoconstriction resulting in reduced placental perfusion and subsequent fetal distress (Foureur, 2008).

This effect is frequently observed transiently when women transfer to the hospital in labour, but once the 'settling in' period has elapsed typically the labour contractions will naturally resume (Foureur, 2008). Several women in this study alluded to their labour 'going off' on arrival to hospital. In Kimberly's case, after a time her contractions picked up again well, but Nicole, who you will recall was 9cm on arrival at the hospital after a very rapid dilation phase of labour, completely "stalled" (*Nicole*) at this point and after trying many non-pharmacological stimulation methods ended up requiring synthetic oxytocin to resume her labour. Her journey to hospital had involved an ambulance, her husband not being with her, and a "fraught" 45-minute journey where she felt nervous and worried about birthing her baby "on the side of the road" (*Nicole*). Whether the birth environment facilitates or hampers normal endogenous oxytocin pathways is a critical determinant of the likelihood of normal birth.

Models and paradigms of birth

The midwifery (social or humanistic) model incorporating continuity of care philosophically champions a partnership relationship with the woman (and those important to her) and this has been positioned as optimally conducive to the 'guardianship' of normal birth (Davis-Floyd, 2017; Guilliland & Pairman, 2010). Midwives value multiple ways of knowing and so are open to and accepting of the proposition that women are the experts about their bodies and their babies (Miller & Bear, 2019). This self-knowing shared by women is constructed as contributing to the partnership in meaningful ways that are incorporated during negotiated decision-making during birth, alongside empirical understandings derived from research and experiential knowing from the ongoing development of midwifery practice wisdom. For well women, birth is viewed by midwives as a normal physiological event, which is anticipated to be straightforward unless it proves otherwise. This model has been contrasted with the so-called medical (biomedical or technocratic) model which has positioned birth as 'only normal in retrospect' (Davis-Floyd, 2017). The medical model is said to champion the use of technology and pharmacology and to promote a fetocentric approach to labour management which involves close surveillance to ensure a positive outcome, and which positions doctors as the experts who call the shots.

In actuality, rather than these lines being drawn neatly around which practitioner group one belongs to, in fact both midwives and doctors hold beliefs about birth that may see them dwelling within *either* approach, and perhaps even in *both* approaches at different

times. It is therefore unhelpful to cast all midwives as 'pro-physiological birth' and all obstetric staff as 'pro-technocratic birth' because the vagaries of individual practice see midwives promoting augmentation and epidural use and doctors suggesting acupuncture or the birthpool from time to time. Instead, the environment for birth could be considered around physiology-promoting or technology-promoting behaviours, and the findings described here can perhaps be more usefully assessed in this light.

The 'seen, heard and felt' environment was strongly resonant of a technology-promoting approach to birth being valued in this setting. Despite the efforts of the women and midwives to 'keep birth normal' the ambience, time pressure and focus on abnormality rendered creating a safe and nurturing space for birth elusive. The close proximity of technological and pharmacological solutions to the challenges of labour coupled with a biomedical focus that sees long labour as problematic can undermine women's resolve and the best efforts of her support team. Whilst most midwifery practitioners promote physiology-enhancing solutions to slow labour – rest, calmness, low lighting, massage, water, emotional support – the tendency for 'rescue' from long labour – anaesthesia, augmentation – was observed as being the 'go-to' from the medical tool-kit. As Sam so eloquently observed "...you didn't need saving – you needed saving from the establishment but you didn't need saving from your own body" (*Sam, core midwife*). In this environment labour tends to be talked about as something that happens *to you*, rather than something that *you do* with your body, and when viewed in this way it is unsurprising that outside management by others rather than inner power actioned by women is what commonly takes precedence.

A rich literature has described the ways that a technology-promoting approach to birth affects the ability of those who champion undisturbed birth to function in a hospital setting. Several recent studies have demonstrated that the relentlessness of working in a risk-averse and pressured context is what leads to midwives feeling unable to provide quality care, to practice 'real midwifery' and to positively influence care planning and provision (Dixon et al., 2017; Harvie, Sidebotham & Fenwick, 2019; Pallant, Dixon, Sidebotham & Fenwick, 2016). Adams, Dawson and Foureur (2017) described how the "pushback to midwifery-led models is alive and well" and Carolan-Olah et al (2015) identified how over time, midwives in their study had lost their passion and became disillusioned from "battling an unsympathetic environment" (p.120) while working with increasingly complex women and taking on more and more responsibility as they became more experienced.

Several ethnographic accounts of the hospital birth environment have "... unearthed a deep sense of disempowerment in midwifery culture, which appears to contradict the role of midwives as facilitating empowerment in the women they work with" (Newnham, 2016). In a similar finding to the current study, Kirkham (1999) described that midwives became self-sacrificing and felt a sense of guilt and blame when navigating the obstetric-led hospital environment. She attributed these feelings and behaviours as being features of oppressed group behaviour. Dove and Muir-Cochrane (2014) more recently identified that a trusting relationship between women and midwives in a continuity of care context could mitigate against the effects of obstetric dominance, because the relationship enabled midwives to enact their role as 'risk-negotiators' even when they were "simultaneously negotiating their professional credibility in a setting that construed their practice as risky" (p. 1063).

It was notable in the findings of this study that newer midwifery practitioners, or those 'unknown' to the obstetric staff were under even closer surveillance than more experienced or known midwives. Being trusted centred on whether these midwives were perceived as compliant to the prevailing obstetric view of what constituted good practice. The midwifery shift coordinators were sometimes complicit in this regulation of midwifery behaviour, and in acquiescing to the obstetric view even when verbally objecting to the proposed course of action ... "well, the boss is the boss we just do as we're told" (*from field notes*). Clear power hierarchies remain evident within this tertiary setting despite consciousness from many about their presence. The most obvious pointer to this is that those who hold the most power seem oblivious to the fact that those who don't hold any are even articulating that a problem exists. It was noticeable that the midwives and doctors reported contrasting views about how collaboration worked between them. Romijn, Teunissen, de bruijne, Wagner and de Groot (2018) similarly found that obstetricians rated their collaboration with midwives more highly than midwives rated their collaboration with obstetricians.

Jefford (2012) theorised the concept of midwifery abdication, defined as when

. . . a midwife surrenders one's voice and/or forsakes one's midwifery skills and/or knowledge, consciously or unconsciously, failing to fulfill and be accountable for one's own professional behaviour in accordance with professional frameworks as (primary) maternity care provider for the woman (Jefford, 2012, p. 14).

Jefford and Jomeen (2015) noted that in situations where the midwives in their study felt strongly bound to honour the woman's desire for a normal birth, sometimes this led to sound clinical reasoning being abdicated in favour of protecting the woman's experience. Whilst describing this concept as "potentially unpalatable to midwifery" (p.117) they postulated that midwifery abdication was context-driven and occurred when midwives were navigating contested space between being accountable to the woman and to their professional frameworks. The examples surfaced within their research centred around midwives "knowing but failing to act" (p.119), wanting to be seen by women as 'good midwives' and prioritising women's experiences – but all in the quest to achieve normal birth experiences.

The term "medical accommodation", coined by Kollath (2012), applies when midwifery behaviour is shaped by influences that challenge midwifery philosophy. Kollath's ethnography examined midwifery practice in South Carolina. Medical accommodation refers to how midwives' practice is defined by medical definitions of risk, and in order to practice legally midwives "must abide by medical policies and procedures" (p. iv) thus subjugating their own beliefs about more holistic pregnancy and birth care.

These concepts of abdication and accommodation are subtly different from the 'acquiescent' behaviours described by my study participants and perhaps reflect the unique context of our midwifery-led continuity of care model. While still posited as being about protecting women's experience, their behaviours were about acquiescing to medical recommendations for intervention rather than subverting them in, order that the women did not experience a fractious environment. This contributed to an increased use of interventions that may have been considered unnecessary by the midwives involved. This midwifery acquiescence was also articulated by Maude (2012) in her PhD study, also conducted in Aotearoa New Zealand, which included exploration of midwives' use of cardiotocography for low risk women. She stated that

midwives are worn down by these daily battles ... midwives conformed to the expectations of the medical professions, to the perceived expectations of their own colleagues and to those of the women and families to whom they were providing care, even if this was at odds with their own beliefs and knowledge of the evidence (p.275).

While many of the findings at the actual data level are resonant with similar studies that have examined maternity setting culture, herein lies an important unexpected finding exposed at this level of understanding. Despite that the midwives felt they

worked hard to protect women's experiences, in some cases this led to exposing women to even more risk by agreeing to facilitate labour interventions they knew or believed were unnecessary. They did this to 'keep it sweet' for the woman, by avoiding a situation of conflict in the birth room between the diverse ideologies of physiology-promoting and technology-promoting solutions to slow labour. The women who were interviewed, on the other hand, described an expectation that their midwives would advocate for them, and some trusted their midwives' judgements about the appropriateness of interventions more than they trusted the medical staff. Deeper exploration of this concept by considering the generative mechanisms lying beneath this finding is illuminating.

The Real Level – the generative mechanisms

The ways that we behave reflect our beliefs, education and socialisation. When we 'nest' this within an industrial context and a biomedical model the interests of the 'machine' can easily edge out the interests of women and midwives. We get many things right – the women in this study stated that they were offered choices, although these were sometimes accompanied by an undercurrent of threat to their baby. But some things we get wrong - midwives feel undervalued. Their knowledge and expertise is marginalised, their relative 'worth' compared to doctors is unfairly judged. This sense of battle and diminution over time can lead to acquiescent behaviour, often framed up around the protection of women's emotional experience. But the women I spoke with expected their midwives to be with them in taking on 'the machine'. They valued their midwives' clinical judgement. Some were sceptical about medicine's technological solutions and suspicious about their motives. In Chapter Eight I proposed some possible generative mechanisms which are at play in reproducing this situation. Depending on how they align and the deliberate choices that women, midwives, doctors and managers make about whether and how to exercise them, these mechanisms can promote or inhibit the possibility for physiological first birth in the tertiary setting.

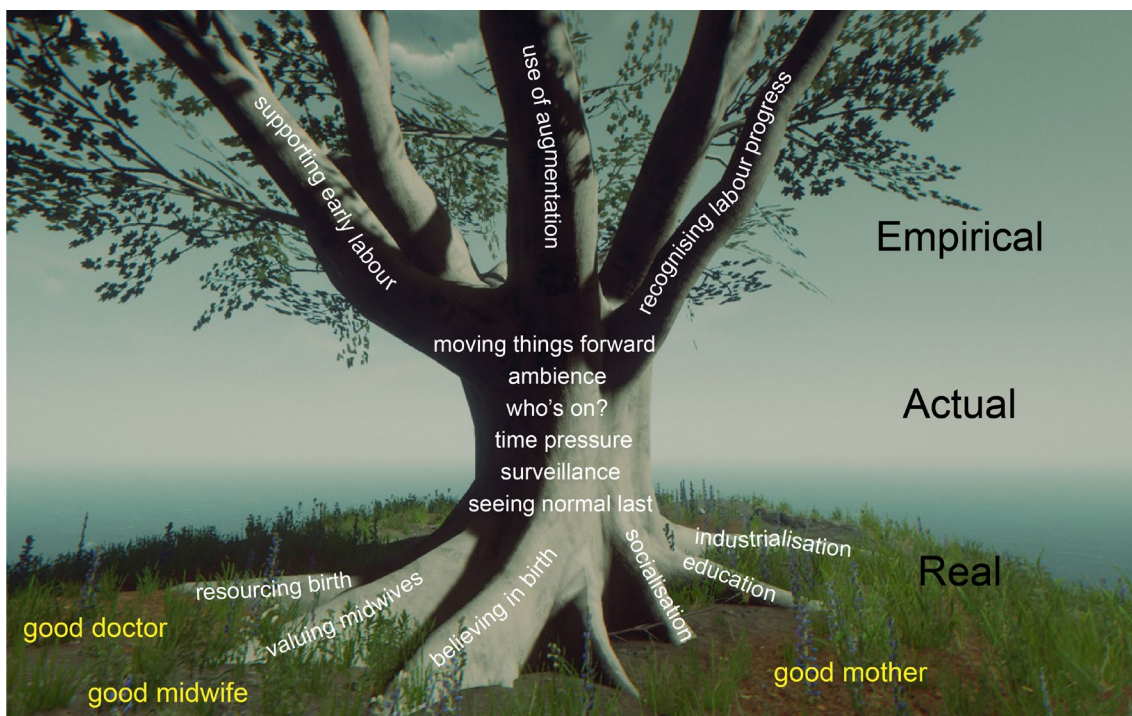
Towards conjunctural contingency – the optimal alignment

When everyone holds a strong conviction of belief in the women's ability to give birth without medical assistance and provides a supportive physiology-enabling presence, she can be assisted to work with her labour rather than be rescued from it. Education for birth that supports midwifery and medical practitioners to accept the breadth of normal labour progress parameters and to appreciate the nuance of subtle labour progress signals can reduce the recommendation for intervention. Practice guidance

which takes cognisance of current evidence regarding the unique normalities of labour progress which may even include demographic variables means care can be tailored to reduce the one-size-fits-all approach currently evident in the facility's clinical guideline.

Feeling deeply invested in protecting women's experience as a consequence of their midwifery education can be courageously expressed as a commitment to advocacy against unnecessary intervention, rather than as acquiescence to medical interference. Doctors can resist the imperative to prove their worth by seeking solutions to slow labour using technology and pharmacology. Managers can insist on provision of a physical birth environment in which the tools for supporting normal birth are plentiful and readily accessed and by fostering a culture in which well women in labour are not scrutinised by medical practitioners unless their assistance is sought. Resourcing for birth can include adequate funding structures that support home visiting prior to hospital admission and ongoing continuity of labour care by known midwives.

To close the loop, a visual representation of the study's ontological and analytic structure, the mechanisms and their conjunctural outcomes might look like Figure 6:



Adapted [Tree image](#) by Unknown Artist under [Creative Commons Licence CC-BY-SA-NC](#)

Figure 6: Visual representation of the real, actual and empirical levels in relation to labour augmentation

Ways of thinking about birth

Across the twentieth century, the move from home to hospital became increasingly entrenched as the safest possible option for birthing. Parallel to this geographic transition, a philosophical transition also occurred which saw the social positioning of birth, previously constructed as dangerous, newly constructed as risky (Fage-Butler, 2017). 'Riskiness' is a prospective notion which implies a potential for avoidability, with the implementation of risk-management strategies holding promise as a means to mitigate against adverse events. In this context, the burgeoning use of biomedical technologies of surveillance (for example ultrasound scanning and cardiotocography) became mainstream tools in the management of pregnancy and birth. Midwifery technologies – for example palpation and symphysis fundal height measurement for assessment of foetal growth, pinards stethoscope for auscultation - became devalued in the process despite evidence of their efficacy (Blix et al., 2019; Henry, 2012).

The ubiquity of risk-averse culture in hospital maternity settings has rendered this approach as the new normal, with women and practitioners alike easily socialised into acceptance of this culture as desirable and safe. Ironically, whilst birth – at least in western resource-rich settings – has never been safer, intervention rates have continued to escalate. The focus on risk management in pregnancy and birth is finally beginning to be re-positioned as potentially *unsafe* for well women by both midwifery and medical scholars (Bisits, 2016; Newnham et al., 2017) because of the harms associated with birth interventions such as labour augmentation, but we have a long way to go to retrench to a more common sense position than that currently held. To this argument I add my small contribution in the form of this thesis.

Midwifery culture, with its emphasis on the promotion of salutogenic factors for birth and focus on supporting physiology, thus represents a strongly counter-cultural force when nested within the dominant biomedical culture. Surveillance over midwifery practice can regulate and control the behaviour of midwives, to the extent that in this study midwives sometimes described being unwilling to challenge medical decision-making. Women in this study described holding an expectation that their midwife would advocate on their behalf. So strategies that support the ability of midwives to 'live their culture' in the hospital setting when supporting well women in labour are a potential area for resistance - remaining outside the purview of the medical gaze by supporting women at home until labour is well advanced, and obstructing the gaze once in hospital by putting only a 'room occupied' notice on The Board are possible and simple strategies to achieve this.

Creating culture change

Organisational culture change is a thorny issue, made more difficult when those in power do not recognise that change is necessary or desirable (Atkinson, 2012). There is undoubtedly benefit in having someone who is not routinely immersed in a workplace culture ‘push pause’ and take a considered look at the place, people, rituals and symbols of an organisation. This is helpful because they can ‘see the water the others are swimming in’. I recall feeling intrigued that a senior obstetric consultant was genuinely surprised when I reported that over 40 percent of primiparous women who come in spontaneous labour to the institution were being augmented with oxytocin, though the midwives were not surprised to hear this. Atkinson (2012) suggests that research which explores how values and beliefs that give rise to group dynamics and working practices can provide a timely “wake-up call between real and espoused values” (p. 33).

Successful culture change strategies are not typically championed by leaders within organisations who are constrained by fiscal or other interests over which they have little control. Nor are they typically led by employees who may lack the resources needed to implement the desired changes. Johnson, Nguyen, Groth, Wang and Ng (2016) completed an extensive literature review on successful culture change within healthcare settings, and concluded that unless there was joint ‘ownership’ of change strategies, those mandated by leaders were viewed with scepticism and were less likely to be successful. Their view is that a combination of interventions is usually needed, but that the first requirement is diagnosis and evaluation. It is important to establish a *need* for change that is based on an existing rather than imagined problem. One contribution of this study is that it ‘makes visible’ the situation regarding over-use of labour augmentation for well women having first babies.

The context of this study presents some unique considerations for the application of organisational ‘culture change’ theories. This organisation is not only bound by the usual contractual arrangements of employer/employee relationships. The woman and her accompanying LMC are temporarily nested within the organisation for the purpose of giving birth, thus both external to and within the organisational culture, so the usual change management strategies that tend to be inward-looking may not work well in this context. By identifying the generative mechanisms and considering the wider implications of how they may be actioned by all those involved, a second contribution is made by this study. Everyone can take responsibility for ensuring positive

alignments of the mechanisms to optimise the possibilities for supporting physiological birth. A truly collective exercise.

All that remains is to offer some concluding thoughts and a hopeful glimpse of a way forward. The concluding chapter draws the thesis to a close by suggesting some strategies for resisting the current climate of over-use of birth interventions in tertiary maternity care settings when tertiary care is not required.

Chapter Ten - Moving things forward.

In the past, knowledge about birth came from the village. One's own people (the women and midwives) held the knowledge. With the rise of science and medicine the expertise shifted from the village to the academy and the laboratory. Our minds and bodies became viewed as separate and the dominion over our bodies became the preserve of medical experts. Our well-being became colonised by medicine.

Midwives are educated and socialised to fulfil an advocacy role and to step up and do this. As long as midwives feel undervalued, they may continue to feel unable to step up. Recent social movements (e.g. #MeToo) have seen a wave of politicised people saying enough is enough! Perhaps this energy can be harnessed to protect birth also. There is a strong appetite for change, and midwives and women together can spearhead this movement.

If the generative mechanisms continue to conjuncturally align in their current patterns (expecting 'trouble' with birth, assuming medical superiority, undervaluing midwifery, acquiescing to keep it sweet, cleaving to technology to provide the answers to birth's uncertainties, being 'good') then perhaps physiological birth *is* doomed. But if we can shift these underlying mechanisms by championing midwifery knowledge and encouraging medicine to accept it doesn't have all the answers, standing firm when challenged by medical decision-making that undermines physiological labour when it is non-evidence-based, honouring the partnerships we have with women, being courageous instead of being good, there is a glimpse of possibility for a changed future.

There is an obvious analogy to what has happened to birth. It too involves colonisation. In the social world seemingly benign dominant cultures, who deeply believe in the wisdom of their own message and firmly believe that they can bring only benefit to those they colonise, instead undermine, devalue and 'break' them. In response, an initial resistance can give way over time to acquiescence to the new regime, and to a devastating poverty of spirit. For some, falling in line with the colonisers provides a way forward. For others, deep resistance manifests over time in subcultures that struggle to survive under the new conditions but which persist and are ripe for renaissance. Things become 'so' and are reinforced and reproduced, because we develop a collective narrative about them which continues to subjugate the indigenous perspective.

Where newly arrived-at territories were involved, colonisers' cartographers drew straight lines on maps where before indigenous peoples had worked their boundaries and organised their societies using the topography of the environment. Working with nature. Straight lines on the map created new divisions that were non-sensical to the indigenous eye. In birth, women's bodies have also had straight lines drawn on them – medicine has defined what labour is, when it is real, how long it should be, what is 'normal'. These straight lines *create abnormality* when women's birthing bodies transgress their artificial time limits.

Practicing 'real midwifery' is a strongly counter-cultural activity within the tertiary setting. Pockets of resistance remain but these midwifery group practices are sometimes marginalised and mistrusted. Newer practitioners striving to establish themselves in this context are met with paternalism, even condescension about their ability, and quickly become enculturated into wielding the technologies of biomedicine. Being proficient at techno-medical birth practice is highly valued in this environment. Experienced midwives sometimes describe this as a failure of current midwifery education – saying that new midwives are medicalised – rather than appreciating the role of the tertiary context in shaping their emerging midwifery practice as student and newly graduated midwives.

Midwives in Aotearoa are not in the privileged position of being a 'new profession' in the same way as those in, say, Canada. Being in that position conferred a strong ability to 'claim' a space and a way of being that is very distinct as a model and has thus been respected for claiming that space and is generally well-supported by obstetrics. The midwifery profession in Aotearoa has developed from an extant version of obstetric nursing and midwifery that has been professionalised and wrested from obstetric domination by a visionary group of women and midwifery leaders. Perhaps an under-appreciated legacy of this herstory is a deeply running undercurrent of kowtowing to the obstetric world view and a hesitancy to stand tall under medical scrutiny.

For midwifery to become the dominant discourse in normal childbirth care, research in which women and midwives have collaborated to produce knowledge, in particular about labour progress, must be positioned as the driver of guideline construction. The current hegemony that sees quantitative biomedical empiricism continuing to highjack the development of practice guidance must be replaced by a more holistic process for research review which privileges women's voiced experience and elevates salutogenic factors that promote humanised care. There is substantial midwifery contribution to understanding women's unique normalities in the progress of labour and what supports

birth to unfold physiologically – knowledge generated by collaborative efforts between women and midwives. If midwives are truly the guardians of normal birth, why is our practice wisdom not able to drive practice for well women in all birth settings, as it is in homebirth and midwifery-led units? The domination of science and medicine as the legitimising forces and “producers of powerful ideological discourse, and their influence on consequent medical interpretations of women’s bodies and childbirth” (Newnham, 2016) have remained uncontested for too long. We tinker at the edges but it requires a paradigm shift to reignite belief. The low risk first time mother who enters labour spontaneously at term may be our last bastion for cementing midwifery’s place in resistance to medical hegemony. One midwife, acting in accord with one woman and her people, one partnership at a time. The corollary is the proverbial canary in the coalmine. Let’s not take her there in a cage – restricted by the one size fits all risk averse and disbelieving biomedical view of birth. Let’s make the environment in there so safe, she can spread her wings and fly.

It can feel bleak, overwhelming, and impotent to think change is possible. This couldn’t be further from the truth. We need to make deliberate individual choices. How would it look if it was working well?

Women would come to birthing suite when they are in strong active labour. They would have an open-access private entrance, be warmly welcomed and then choose which space they’d like to be in to give birth. Her people would likewise be welcomed and shown how to access all the things they need to support her. Her midwife would know that help is at hand if it is needed but also that they will be left alone unless she and the woman agree they want to get someone else involved. Her assessments would be trusted, and she could ask another midwife or a doctor for a second opinion if she’s not sure, and know that this will be seen as wise and good practice rather than as a deficit in her knowledge. The woman would be supported in whatever manner she chooses, by whomever she chooses. If she requires assistance she would already know all the risks and benefits and alternative options because these will have been discussed during pregnancy with her midwife. Her name might be on the Board, with “in labour” written alongside, and nothing else, except perhaps “Birthed” once she has.

A doctor would work in a continuity model for this woman if one became involved. There would be a dedicated team of on-call doctors for the well low-risk women, one of whom would be summoned to assist the woman if complexity develops, and who would then provide continuity until after the baby is born. This investment in each woman’s experience would influence their decision-making because they cannot just

leave it to the next shift to sort out, or offer the caesarean section prior to the shift change, and they would thus take increased responsibility for the outcomes of the care they provide and improve their own work satisfaction when they discover the delight of “seeing someone through”. By being part of this on-call team, doctors would learn how infrequently they are required and from this, learn to trust birth.

Strategies to resist over-application of augmentation procedures – study recommendations

This research acknowledges that while ideally - due to high levels of unnecessary intervention and associated morbidity for women and babies - well first-time mothers at term with spontaneous onset of labour should not be coming to the tertiary hospital environment for birth. However, our socially constructed vision of birth as risky and hospital care as safe means that many such women will continue to choose this option. Optimising the possibility for physiological birth requires a focussed re-commitment to the fundamental midwifery philosophical position about what evidence-based and effective labour support looks like, including continuity of care where geography allows.

This research confirms that home visiting of women in labour by LMCs increases the likelihood that women are admitted to hospital once labour is more advanced, and also that later admission results in reduced application of augmentation procedures. This care practice should be incentivised and separate funding allocated to support this aspect of service provision. Financial support for the known back-up midwife to attend when necessary has recently been secured and should prevent the handover of care to unknown caregivers if labour becomes complex. The partnership model of midwifery affirms that a woman and her midwife create a relationship in which they work together, throughout the woman’s experience. The recent trend towards separating primary midwifery from secondary midwifery does not serve women’s interests well.

Education for women and their families could more practically address the support needs of women across the labour continuum. It appears that partners and others manage well supporting women during early labour but feel less able to provide meaningful support when labour intensifies and once in the hospital setting. Strategies that enhance the comfort of support people to remain actively involved and increase their capacity to provide emotional and practical support as labour progresses could mitigate against the desire to rescue women from their labour sensations by encouragement of regional anaesthesia.

Once admitted to hospital, this group of women should remain outside the purview of medicine unless a specific request for consultation has taken place. This could be achieved simply, by either locating them in a physically separate set of birthing rooms, and by writing “in labour” on The Board with no further detail. This would remove the temptation for doctors to be scrutinising progress ‘around the Board’ and placing pressure on midwifery shift coordinators to facilitate consultations that have not been requested by the LMC.

Should augmentation become necessary, the oxytocin infusion should ideally not be commenced until the woman has reached active labour. This represents an important strategy to prevent the primary caesarean section, securing a brighter maternity future for the woman.

Consideration should be given to a separate on-call medical registrar roster with doctors specifically available for when complexity develops during the labour of a woman in this group. An obligation to provide continuity of medical care until the baby’s birth should attend this role. This would improve consistency of medical decision-making without shift changes imposing pressure from differing points of view or allowing the time of day to dictate care.

The physical environment should be set up with a focus on physiology-enhancing ambience. An array of resources should be available for use, including sonicaid for visiting LMCs; this will improve the likelihood that intermittent auscultation will remain the method of choice for establishing fetal well-being, along with maternal reports of movements. Admission cardiotocography should be actively discouraged for women with uncomplicated pregnancies. Well-conducted initial assessment and ongoing IA will identify if a need to convert to continuous monitoring is warranted.

Clinical guidelines developed to support practice decision-making should incorporate midwifery research regarding normal labour and qualitative research that addresses women’s experience, so recommended care incorporates a diversity of ‘ways of knowing’ about birth that will better reflect women’s needs.

Implications for further research

This research has provided a baseline against which further audit research could be assessed, once the Labour Dystocia Guideline has been updated to reflect current evidence about labour progress for women giving birth for the first time. Sharing of the quantitative findings and my presence in the birthing unit sparked interest in the care of this group of women by focussing attention on outcomes and by engagement in

conversations with clinicians. If a difference in outcomes could be identified in a follow-up audit this could encourage clinicians to more enthusiastically apply new evidence to their practice.

This research did not address the situation of women whose pregnancies are complex and whose care therefore also includes obstetric input from the onset of labour. These women may have different experiences of exercising personal autonomy, as may their LMC midwives if they remain involved. Qualitative examination of the tertiary environment's impact on the experiences of these women could yield additional insight including whether their self-perception of their risk status affects their decision-making or their underlying acceptance of the technologies of biomedicine.

Strengths and limitations of the research

The nine women interviewed for this research volunteered to speak with me about their experiences. This suggests that they were motivated about telling their stories, and thus that they felt they had a story to tell. They may be dissimilar to the other women who did not volunteer to participate. The aim of interviewing the women was to provide some context for my investigation of how women who experience long labour are supported through their experience and how the birth environment influences their births. There is no intention to generalise their experiences, rather, I aim to use their voices to come closer to an understanding of the impact of the birth environment on their decision-making and experiences. No claims to truth are made in this respect, but I remain grateful for the illuminating discussions we had and the insights these women gifted me.

As a researcher I have felt both uplifted and let down by my research experiences. Being new to research I have learned much along the way. I believe my findings provide sufficient justification for the study site to pay attention to the over-application and unnecessary use of labour augmentation and I strongly urge Guideline reviewers to update and correctly apply recent evidence regarding labour progress for first birth to their Labour Dystocia Guideline. On the other hand, my attempt at observing the 'augmentation consultation' proved unachievable despite my prior scoping of this possibility being so positive, so it remains unknown how much truly informed choice was offered and what questions women and their families might have for doctors during this encounter, save for the snippets gleaned from second-hand stories told to me by the midwives.

My immersion in the data gathering, transcribing and analysis as the sole researcher is a strength in this research. At times overwhelmed by the sheer volume of data, I nonetheless can accept responsibility for any conclusions drawn, trusting they reflect the intent of my participants due to my attention to ensuring ethical conduct of the study. I know that my findings can only ever be seen in light of the context current at the time, and therefore I offer them as a contribution to understanding the meaning my participants ascribed to their experiences of receiving or providing care rather than offering them as the truth about first birth in a tertiary hospital for well women having their first babies.

The use of critical realism as a theoretical underpinning and analytic framework for this study enabled me to delve well below the surface of the outcome data to posit some possible generative mechanisms and therefore offer some possible solutions to the problem of the unnecessary application of labour augmentation. By considering how the structural mechanisms operating within the tertiary hospital environment align to constrain the ways support can be offered to women experiencing slow labour, it became possible to consider how addressing mechanisms as disparate as belief in women's ability, environmental ambience, resourcing, and the education socialisation and industrialisation that surrounds birth could better align to achieve more positive outcomes. It is a hopeful vision, and only time will tell if a realignment of structural conditions can create change. Culture change within organisations cannot be imposed from the top down. Rather it is the critical mass associated with the commitment of individuals who feel valued and enabled that can achieve incremental or dramatic shifts.

Conclusion

It is the very attributes that make the tertiary hospital the best place to be if you are experiencing a complex pregnancy or an emergency (vigilance, poised-ness for action, abundant technology and ever-ready pharmacology) that threaten the respectful watchful waiting required to support physiological birth for healthy women who enter labour spontaneously at term when giving birth to their first babies.

An almost -'perfect system' is in place; a well-embedded midwifery-led continuity of care model incorporating seamless and integrated secondary referral processes. This 'works' optimally when women and their caregivers plan birth outside the hospital setting. But despite this enabling model of maternity care, once 'nested' within the tertiary hospital setting the impact of social, professional and industrial discourses

(working conjuncturally as generative mechanisms) overwhelms the salutogenic factors that should protect normal birth in this setting.

Funding a re-focussed commitment to providing continuity of care across the labour continuum, home visiting in early labour, enhancing physiological birth support in both the relational and environmental realms, averting the obstetric gaze and prioritising women's needs over institutional needs represent the best way forward as strategies to resist the inexorable rise of obstetric intervention. One woman and her family, one midwife and her professional peers, and one dedicated wrap-around community - including doctors as necessary - at a time.

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Appendices

Appendix A – Permission to use Critical Realism layered structure image.

Appendix B – Audit Data Collection Tool

Appendix C – Ethics Approval Letters, Amendment Approvals and Endorsements (C1 to C10)

Appendix D – Participant Information Sheets (D1 to D9)

Appendix E – Participant Consent Forms (E1 to E4)

Appendix F – Interview and Focus Group proposed question schedules (F1 and F2)

APPENDIX A - Permission to use Critical Realism Layered structure image

denis.walsh@ntlworld.com
Thu 12/19/2019 8:16 PM

• Suzanne Miller

Of course - please use it. It was based on the Dyson reference but was redrawn completely. Though I am retired now, I am so pleased that our critical realism paper is still influential as it is so helpful as a theoretical underpinning to expose generative processes that often oppress women and midwives.
Denis

Suzanne Miller
Thu 12/19/2019 2:51 PM
(No message text)

DW

Denis Walsh
Thu 12/19/2019 2:47 PM
I have retired from my post so please forward emails for me to denis.walsh@ntlworld.com from now on. Best wishes, Denis This message and any attachment are intended solely for the addressee and may contain confidential information. If you have received this

Some content in this message has been blocked because the sender isn't in your Safe Senders list. [I trust content from suzanne.miller@op.ac.nz.](#) | [Show blocked content](#)

You forwarded this message on Thu 12/19/2019 2:51 PM

Suzanne Miller
Thu 12/19/2019 2:46 PM

• denis.walsh@nottingham.ac.uk <Denis.Walsh@nottingham.ac.uk>

kia ora Dr Walsh
I am writing to request permission to reproduce an image in my PhD thesis which was adapted by you and Kerry Evans in your 2014 article 'Critical realism: An important theoretical perspective for midwifery research' *Midwifery*, 30: e1-e6

The image is on Page e2 and is the one attached to this email. I have used critical realism as an underpinning theoretical perspective to investigate the culture of the tertiary maternity hospital in relation to the augmentation of labour for well first-time mothers in spontaneous labour in one New Zealand hospital. I would like to use the image to support my explanation of the layered ontology proposed by Bhaskar, of course acknowledging you and Ms Evans in the process.

I understand that the original image came from Dyson and Brown (2005) and would also acknowledge this original source in my work.

I look forward to hearing from you, even if it is to redirect me as necessary!

many thanks and happy holidays if you are having any

Suzanne

APPENDIX B – Data Collection Tool

Datasheet for Audit of Labour Dystocia Guideline. (NB the NHI will be removed when data is entered into spreadsheet for analysis, included here for cross-referencing purposes only if necessary).

Woman/Wahine: NHI Spreadsheet code #

Age in years: Ethnicity: 1. 2. 3.

BMI: Smoker yes / no

LMC: SEMW Obstetrician Team (mw) Team (obs)

Midwifery care in labour by: own LMC mw back-up mw core midwifery staff

Midwife changed during labour yes no

Checklist for inclusions:

Singleton	√
Cephalic	√
37-42 weeks	√
Low risk*	
HB transfer?	
Spontaneous onset of labour	√

*low risk means no current medical conditions eg GDM, pre-eclampsia, not <37 weeks or >42 weeks, no malpresentations, multiple pregnancy etc

Labour

If recorded:	date	time
Admission to Birthing Suite		
Onset of contractions		
Labour 'established'		
Full dilatation		
Beginning active 'pushing'		
Birth of baby/pepi		
Birth of placenta/whenua		

Diagnosis of full dilatation: by VE by behavioural cues other?

Labour practices

							date	time
IV fluids								
Rupture of membranes		ARM	SRM					
Indication for ARM if recorded:								
Oxytocin infusion								
Indication for oxytocin:								
Duration of oxytocin infusion						Hours:		
Dilatation at commencement of oxytocin infusion								
Hours of labour prior to commencement of oxytocin infusion								
Perineum	Intact / graze	Episiotomy	1 st deg	2 nd deg	3 rd deg	4 th deg		
Third stage			Phys.	Active	Tmt	Infusion		
Estimated/measured blood loss						mls		

Mode of Birth: SVB Forceps Ventouse LSCS

Labour management compliant with dystocia guideline Yes No

Baby/Pepi Spreadsheet Code #

APGARS 1 minute: 5 minutes: 10 minutes:

Birthweight: g

Gender Girl Boy Other

Breastfed within one hour yes no

Skin to skin during first hour yes no

Admitted to NICU yes no date / time of admission:

Indication:

NOTES: (eg narrative text re augmentation decision-making etc)

Compliance with Guidelines on Management of Labour Dystocia – Primipara

Specialist Consultation

1st stage: after 4cm dilatation

- Less than 1cm/hr over any 3-4 hour interval
- Contractions < 1:5

2nd stage:

- Contractions < 1:5
- OR PP not engaged, or station higher than 0 at fully, excessive moulding
- OR PP not visible after >60 minutes active pushing
- OR not delivered by 90 minutes active pushing
- OR not delivered by 120 minutes second stage

Introduce conservative supportive measures

Encouragement, reassurance, mobilisation, adequate hydration, adequate analgesia

Transfer from level 0 to hospital

Amniotomy

If epidural required, obstetric consultation

If transfer required, obstetric consultation

Reassess after 2 hours if in 1st stage

If progress good (ie > 2cm, or good descent)

Continue conservative measures

Reassess 2 hours

If epidural requested, consult to consider augmentation

Consult if in 2nd stage

If progress poor – consult/EFM

Obstetric Registrar Consultation/ Management Approach

Review labour, risk factors, clinically assess maternal and fetal well-being, stage of labour, fetal position, station, pelvic diameters

IF: labour clearly obstructed CS after discussion with consultant

IF: uterine inertia/OP position:

- 1st stage: IV fluids, IV oxytocin → review 4 hours
- 9+ cm: IV fluids, IV oxytocin → review 2 hours
- 2nd stage and not pushed long: IV oxytocin → review 1 hour
- 2nd stage, pushed > 1 hour: ? asst delivery/CS

At review:

Pathological CTG → CS

No progress or evidence of obstruction → CS

Poor progress → consider CS/ more augmentation

With a dense epidural 2nd stage may be prolonged and Consultant may allow 3 hours.

After 8 hours oxytocin discuss with consultant to plan ongoing management.

Caesarean Section for poor progress when:

There are signs that labour is obstructed, or there has been inadequate response to oxytocin augmentation in 1st stage, or after adequate augmentation in 2nd stage the fetal head is not engaged, is palpable above the brim or if there is excessive moulding. (NB: CS for prolonged obstruction is a difficult procedure which requires considerable expertise if serious morbidity is to be avoided).

Assisted vaginal delivery for poor progress:

In delivery room: when clinical scenario and findings indicate this will be easy and uncomplicated

Trial of ventouse/forceps is recommended for mid-pelvis, not direct OA or direct OP (NB Consultant to be immediately available).

(Only credentialed clinicians can do assisted delivery or CS without a Consultant present).

APPENDIX C1 – Letter confirming Audit outside HDEC Scope.



Wellington 6011

Health and Disability Ethics Committees
Ministry of Health
133 Molesworth Street
PO Box 5013

04 816 3985 hdec@moh.govt.nz

28 March 2017

Ms Suzanne Miller

[REDACTED]

[REDACTED]

[REDACTED]

Dear Ms Miller

Re:	HDEC ref:	17/STH/50
	Study title:	The Culture of first birth in Aotearoa/New Zealand: Primary birth in a tertiary setting.

Thank you for submitting your application for HDEC review on 27 March 2017. The Secretariat has assessed the information provided in your application and supporting documents against the Standard Operating Procedures.

This application has not been validated, as on the basis of the information you have submitted, it does not appear to be within the scope of HDEC review. This scope is described in section three of the *Standard Operating Procedures for Health and Disability Ethics Committees*.

This audit assesses information from women who have given birth in New Zealand to compare the care they received to the guidelines. This project involves assessing practice against a guideline allows opportunity for service provision improvements if noncompliance is identified.

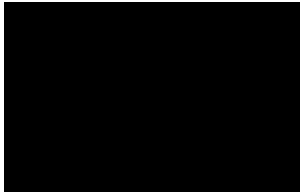
As your study is an Audit or related activity it does not require HDEC review as it does not involve the use, collection, or storage of human tissue without consent (paragraph 33 of the Standard Operating Procedures for Health and Disability Ethics Committees).

If you consider that our decision not to validate this application is in error please contact us as soon as possible giving reasons for this.

This letter does not constitute ethical approval or endorsement for the activity described in your application, but may be used as evidence that HDEC review is not required for it.

Please don't hesitate to contact us for further information.

Yours sincerely,



Advisor

Health and Disability Ethics Committees hdec@moh.govt.nz

Encl: appendix A: documents submitted

I - 17/STH/50 – Acknowledgement of an invalid HDEC Application – 28 March 2017

Page 1 of 2

Appendix A Documents submitted

<i>Document</i>	<i>Version</i>	<i>Date</i>
CV for CI: CV	1	14 February 2017
Survey/questionnaire: Data collection tool for audit	1	14 February 2017
Protocol: This the research proposal for the overall project. This application relates to only one aspect of the project.	1	17 February 2017
Evidence of scientific review: Scientific peer review verification	version 1	27 March 2017
Application	1	-

I - 17/STH/50 – Acknowledgement of an invalid HDEC Application – 28 March 2017

Page 2 of 2

APPENDIX C2 – VUWHEC Approval for Audit



Phone 0-4-463 5480
Email susan.corbett@vuw.ac.nz

MEMORANDUM

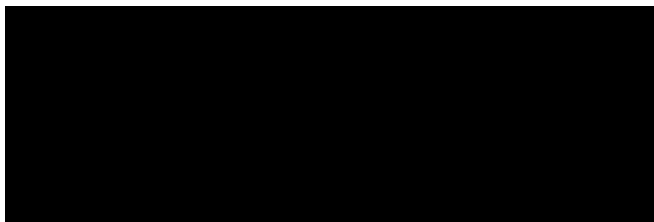
TO	Suzanne Miller
COPY TO	Robyn Maude
FROM	AProf Susan Corbett, Convener, Human Ethics Committee
DATE	26 June 2017
PAGES	1
SUBJECT	Ethics Approval: 24875 Audit of Clinical Records against DHB Labour Dystocia Guideline

Thank you for your application for ethical approval, which has now been considered by the Standing Committee of the Human Ethics Committee.

Your application has been approved from the above date and this approval continues until 30 June 2018. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Kind regards



Susan Corbett

Convener, Victoria University Human Ethics Committee

APPENDIX C3 – VUWHEC Approval for Interviews/Focus Groups with Clinicians



Phone 0-4-463 5480

Email susan.corbett@vuw.ac.nz

MEMORANDUM

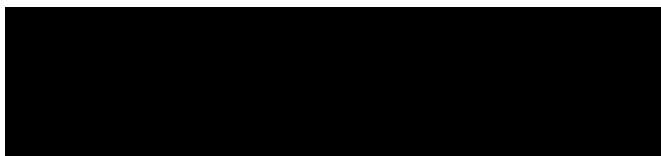
TO	Suzanne Miller
COPY TO	Dr Robyn Maude
FROM	AProf Susan Corbett, Convener, Human Ethics Committee
DATE	9 August 2017
PAGES	1
SUBJECT	Ethics Approval: 24777 Clinicians perspectives on working with low risk women giving birth for the first time.

Thank you for your application for ethical approval, which has now been considered by the Standing Committee of the Human Ethics Committee.

Your application has been approved from the above date and this approval continues until 28 February 2018. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Kind regards



Susan Corbett

Convener, Victoria University Human Ethics Committee

APPENDIX C4 – HDEC Approval for Interviews Women and Clinicians



Health and Disability Ethics Committees

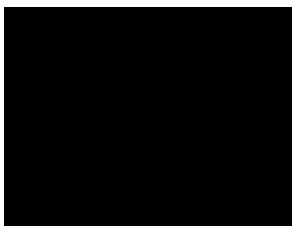
Ministry of Health
133 Molesworth Street
PO Box 5013
Wellington

6011

0800 4 ETHICS
hdec@moh.govt.nz

12 May 2017

Ms Suzanne Miller



Dear Ms Miller

Re:	Ethics ref:	17/NTA/75
	Study title:	The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting.

I am pleased to advise that this application has been approved by the Northern A Health and Disability Ethics Committee. This decision was made through the HDEC-Expedited Review pathway.

Conditions of HDEC approval

HDEC approval for this study is subject to the following conditions being met prior to the commencement of the study in New Zealand. It is your responsibility, and that of the study's sponsor, to ensure that these conditions are met. No further review by the Northern A Health and Disability Ethics Committee is required.

Standard conditions:

1. Before the study commences at *any* locality in New Zealand, all relevant regulatory approvals must be obtained.
2. Before the study commences at *a given* locality in New Zealand, it must be authorised by that locality in Online Forms. Locality authorisation confirms that the locality is suitable for the safe and effective conduct of the study, and that local research governance issues have been addressed.

Non-standard conditions:

□ The Committee noted that you are collecting information about the baby including NHIs. This should be clarified in the Participant Information Sheet and consent sought. Health information records need to be kept 10 years after the infants reach the age of 16.

Non-standard conditions must be completed before commencing your study. Nonstandard conditions do not need to be submitted to or reviewed by HDEC before commencing your study.

If you would like an acknowledgement of completion of your non-standard conditions letter you may submit a post approval form amendment. Please clearly identify in the amendment that the changes relate to non-standard conditions and ensure that supporting documents (if requested) are tracked/highlighted with changes.

For information on non-standard conditions please see section 128 and 129 of the Standard Operating Procedures at <http://ethics.health.govt.nz/home>.

After HDEC review

Please refer to the *Standard Operating Procedures for Health and Disability Ethics Committees* (available on www.ethics.health.govt.nz) for HDEC requirements relating to amendments and other post-approval processes.

Your **next progress report** is due by **11 May 2018**.

Participant access to ACC

The Northern A Health and Disability Ethics Committee is satisfied that your study is not a clinical trial that is to be conducted principally for the benefit of the manufacturer or distributor of the medicine or item being trialled. Participants injured as a result of treatment received as part of your study may therefore be eligible for publicly-funded compensation through the Accident Compensation Corporation (ACC).

Please don't hesitate to contact the HDEC secretariat for further information. We wish you all the best for your study.

Yours sincerely,



Dr Brian Fergus
Chairperson

Northern A Health and Disability Ethics Committee

APPENDIX C5 – HDEC Approval of Amendment – Extending Interview
Recruitment Strategy



Wellington 6011

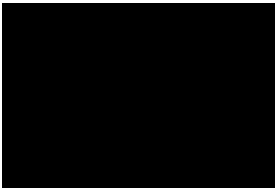
Health and Disability Ethics Committees

Ministry of Health
133 Molesworth Street
PO Box 5013

0800 4 ETHICS
hdec@moh.govt.nz

11 December 2017

Ms Suzanne Miller

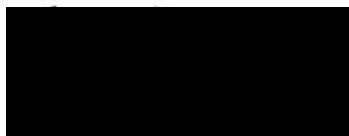


Dear Ms Miller

Re:	Ethics ref:	17/NTA/75/AM01
	Study title:	The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting.

I am pleased to advise that this amendment has been approved by the Northern A Health and Disability Ethics Committee. This decision was made through the HDEC Expedited Review pathway. Please don't hesitate to contact the HDEC secretariat for further information. We wish you all the best for your study.

Yours sincerely,



Dr Brian Fergus

Chairperson

Northern A Health and Disability Ethics Committee

Encl: appendix A: documents submitted appendix B:
statement of compliance and list of members **Appendix A**

Documents submitted and approved

Document	Version	Date
A5 flyer for insertion in Well Child Bool	v1	22 November 2017
Poster for Well Child Clinics	v1	22 November 2017
Post Approval Form	01	-

APPENDIX C6 – HDEC Approval – Amendment to Extend Interview Approval to Observation



Wellington 6011

Health and Disability Ethics Committees

Ministry of Health
133 Molesworth Street
PO Box 5013

0800 4 ETHICS
hdec@moh.govt.nz

14 March 2018

Ms Suzanne Miller



Dear Ms Miller

Re:	Ethics ref:	17/NTA/75/AM02
	Study title:	The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting.

I am pleased to advise that this amendment has been approved by the Northern A Health and Disability Ethics Committee. This decision was made through the HDEC Expedited Review pathway.

Non-standard conditions:

1. Please ensure the Participant Information Sheet informs participants that they will be asked to sign a consent form and will be given a copy to keep (participant should be given copies of both Participant Information Sheet and signed consent form).
2. Please include the statement, “you are welcome to consult with family/whanau/support people to help you decide” in the Participant Information Sheet.
3. Please include in the PIS/CF that participant health information will be held securely for a minimum Of 10 years (Health (Retention of Health Information) Regulations 1996).
4. In the contact details line (at the bottom of the Consent form), please amend to indicate that this is being requested for the purpose of sending a link to the completed study results.
5. Under the Human Ethics Committee information section of the Participant Information Sheet, please include the Health and Disability Ethics Committees contact details.
6. Please note, there is no requirement to include Whanau Services contact on the Consent Form if it is already in the Participant Information Sheet.

Non-standard conditions must be completed before commencing any changes as a result of this amendment. Non-standard conditions do not need to be submitted to or reviewed by HDEC before commencing any changes as a result of this amendment.

If you would like an acknowledgement of completion of your non-standard conditions letter you may submit a post approval form amendment. Please clearly identify in the amendment that the changes relate to non-standard conditions and ensure that supporting documents (if requested) are tracked/highlighted with changes.

For information on non-standard conditions please see section 128 and 129 of the Standard Operating Procedures at <http://ethics.health.govt.nz/home>.

Please don't hesitate to contact the HDEC secretariat for further information. We wish you all the best for your study.

Yours sincerely,



Dr Brian Fergus
Chairperson

Northern A Health and Disability Ethics Committee

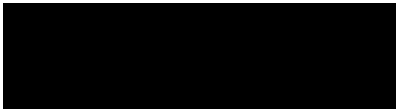
Encl: appendix A: documents submitted appendix B:
statement of compliance and list of members

Appendix A

Documents submitted and approved

Document	Version	Date
PIS/CF: Invitation to participate in Observation of Clinical Consultation	1	08 February 2018
PIS/CF: Consent Form - Women - Observation	1	08 February 2018
Investigator's Brochure: Poster for Birthing Rooms	1	08 February 2018
Investigator's Brochure: Poster for Birthing Suite Office	1	08 February 2018
PIS/CF: Information Letter for Birthing Suite staff	1	08 February 2018
Letter of Support Clinical Leader - Obstetrics	1	08 February 2018
Scope of Review form	1	08 February 2018
Post Approval Form	02	-

APPENDIX C7 – Locality Approval at Study Site.





Suzanne Miller

Suzanne.Miller@op.ac.nz

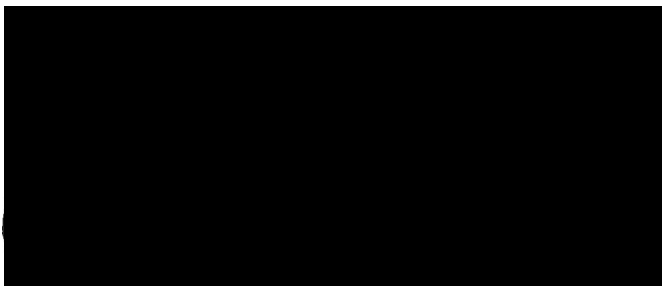
Dear Suzanne

RE: First birth in a high-tech setting in Aotearoa New Zealand: How the unit culture influences the likelihood of normal birth.

The Clinical Audit and Research Committee for 
 agree in principle to support the above PhD study of
Suzanne Miller.

The study is entitled: First birth in a high-tech setting in Aotearoa New Zealand: How the unit culture influences the likelihood of normal birth.

All committee members agree that this study is of importance to inform an optimal environment in which women give birth particularly for their first birth.



Chairman

Clinical Research and Audit Committee
O&G Consultant



RESEARCH ADVISORY GROUP MĀORI (RAG-M)

APPLICATION FORM

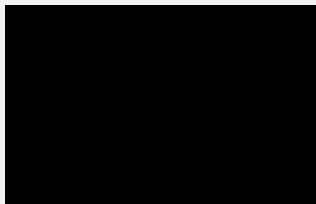
[Office use only]

Tēnā koe

Your application has been endorsed

Ngā mihi nui,

Signed:



RAG-M Chairperson

District Health Board Māori Review of Research

Application Form

Date: [Click here to enter a date.](#)

RAG-M Number #498

Study title: <i>The Culture of first birth in Aotearoa: Primary birth in a tertiary setting.</i>	Documentation provided with this application: <input checked="" type="checkbox"/> all patient information and consent forms <input type="checkbox"/> documentation for collecting patient information <input type="checkbox"/> study protocol <input type="checkbox"/> ethics application form <input type="checkbox"/> fee payment form or receipt <input checked="" type="checkbox"/> other documentation, please describe:
Principal investigator: Suzanne Miller	
Contact person: Suzanne Miller	
Contact details: PhD Candidate	

APPENDIX C9 – Research Advisory Group – Māori: Endorsement of Interviews



RESEARCH ADVISORY GROUP MĀORI (RAG-M)

1 August 2017

Tēnā koe

Your application has been endorsed

Thank you for your application.

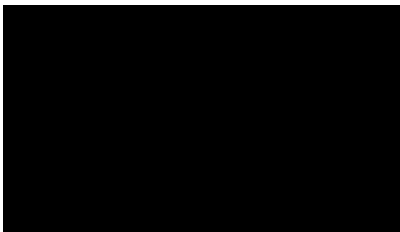
While we are happy to endorse your study we strongly encourage the following:

Section 5e) Describe any other provisions you have made in your study to ensure the cultural preferences of Māori have been considered:

Please ensure that Māori participants are offered space for a karakia prior to interviewing/focus group.

We wish you all the best in your study and look forward to hearing back from you in due course.

Ngā mihi nui



Chair

APPENDIX C10 – Endorsement Letter from Clinical Leader-Obstetrics

[REDACTED]

[REDACTED]

5 February 2018

To whom it may concern

Suzanne Miller, who is a PhD student at Victoria University of Wellington, met with me today to discuss her plans to conduct a period of observation within the Birthing Suite at [REDACTED]. This will be the final aspect to her project which is exploring the experiences and outcomes for well women with uncomplicated pregnancies who come to the tertiary hospital to give birth to their first babies.

I understand that once ethical approval is granted, Suzanne will hold some meetings prior to the observation period in order that staff can ask questions and hear about the aims of the observation period.

This letter is to confirm that in principle I support Suzanne's plans and her application to the Ethics Committee regarding this aspect of her work.

Yours sincerely

[REDACTED]

[REDACTED]



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

INFORMATION SHEET FOR PARTICIPANTS

Kia ora and congratulations on the birth of your baby/pepi. Thank you for your interest in this project. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to take part, thank you for considering my request.

Who am I?

My name is Suzanne Miller and I am a Doctoral student in the Graduate School of Nursing, Midwifery and Health at Victoria University of Wellington. This research is one aspect of a larger project that will contribute towards my PhD thesis.

What is the aim of the project?

This project seeks to understand the experience of women/wāhine who have given birth for the first time within a tertiary hospital. You have been invited to participate because you have recently given birth within such a facility, and when you came to the hospital in labour you were considered 'low risk' and you went into labour by yourself (that is, did not have an induction of labour). Women/wāhine such as yourself are the most likely to have a straightforward birth experience, so I am interested to talk with you about the decisions that you made as your labour and birth progressed. I will not be collecting information about your baby/pepi at the interview.

This research has been approved by the New Zealand Health and Disability Ethics Committee (17NTA75) and endorsed by the Research Advisory Group – Māori (RAG-M #498).

How can you help?

If you agree to take part, and after signing a consent form, I will interview you in a place that is most suitable for you as a new mother. This can be at your home if you wish. You are welcome to have a support person with you at the interview. I will ask you some questions about your birth experience. I will not be collecting any information about your baby/pepi at the interview, which will most likely take up to an hour. I will record the interview and write it up later. You can stop the interview at any time, without giving a reason. You can withdraw from the study up to four weeks after the interview. If you withdraw, the information you provided will be destroyed or returned to you. As a courtesy to your LMC, if you agree to participate in an interview I will send them a letter to let them know you are participating in the study, if you are happy for me to do so.

PTO→

What will happen to the information you give?

This research is confidential. I will not name you in any reports, and I will not include any information that would identify you. Only my supervisors and I will read the notes or transcript of the interview. The transcript of your interview will be sent to you so that you have the opportunity to confirm that what is written reflects what you said, before it is used in my research report. The interview transcripts, summaries and any recordings will be kept securely and destroyed ten years after the research ends.

What will the project produce?

The information from my research will be used in my PhD thesis. You will not be identified in my report. I may also use the results of my research for conference presentations, and academic reports. I will take care not to identify you in any presentation or report.

If you accept this invitation, what are your rights as a research participant?

You do not have to accept this invitation if you don't want to. If you do decide to participate, you have the right to:

- choose not to answer any question;
- ask for the recorder to be turned off at any time during the interview;
- withdraw from the study up until four weeks after your interview;
- ask any questions about the study at any time;
- read over and confirm the transcript of your interview;
- choose or agree on another name for me to use rather than your real name;
- if you are a wahine Māori, you may ask to be interviewed by a Māori research assistant.

If you have any questions or problems, who can you contact?

If you have any questions, either now or in the future, please feel free to contact either:

Student:

Name: Suzanne Miller

University email address:

Suzanne.Miller@vuw.ac.nz



Supervisor:

Name: Dr Robyn Maude

Role: Senior Lecturer

School: Graduate School of Nursing,
Midwifery and Health

Phone: 04 4636137

Robyn.Maude@vuw.ac.nz

What happens next? If you are interested in participating, please phone, email or text me your contact details and I will make contact with you within one week to talk about your ongoing involvement.

Human Ethics Committee information

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convener: Associate Professor Susan Corbett. Email susan.corbett@vuw.ac.nz or telephone +64-4-463 5480.

Whanau Care Services

Provide support for whanau, and are available at (04) 806 0948, or Fax(04) 385 5421
Email wcs@ccdhb.org.nz Website www.ccdhb.org.nz

APPENDIX D2 – Participant information Sheet – Health Professionals – Interviews/Focus groups



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

PARTICIPANT INFORMATION SHEET – HEALTH PROFESSIONALS

Tēnā koutou. My name is Suzanne Miller, and I am a PhD Candidate at the Graduate School of Nursing, Midwifery and Health at Victoria University of Wellington. I am conducting a research project exploring the phenomenon of first birth in a tertiary maternity setting, focusing on what happens for low risk women who have gone into labour spontaneously at term. As one aspect of the overall study, I am keen to talk to maternity care providers, both midwifery and obstetric, to explore facets of their decision-making and care provided to such women during labour.

This research has been approved by the Victoria University of Wellington Human Ethics Committee [VUWHEC #24777] and endorsed by the Research Advisory Group – Māori (RAG-M #523).

How can you help?

If you are interested in having a discussion with me about first birth, and agree to take part after asking any further questions you may have, there are two options available to you. If you would prefer to be interviewed one to one, we can arrange a suitable time and place for an interview, which would likely take between 30 and 60 minutes, and which would be audio recorded for later transcription.

Alternatively, if you would be happy to be part of a group conversation with practitioners of your own practice type (ie, core midwives, LMC midwives, or doctors), an agreed time and place for a focus group discussion will be arranged. This group conversation will also be audio-recorded and transcribed.

Confidentiality: You will be asked to choose a pseudonym at the start of either the interview or focus group, so that your confidentiality can be assured. If you are part of a focus group discussion, you will be additionally asked to sign a Confidentiality Agreement about the discussion itself, because the other members of the group will be known to you. You will not be identified in any subsequent reports or presentations that arise from the research.

A transcribing assistant, if used, will also be asked to sign a confidentiality agreement.

What will happen to the information you give?

This research is confidential. I will not name you in any reports, and I will not include any information that would identify you. Only my supervisors and I will read the notes or transcript of the interview/focus group. The transcript of your individual interview will be sent to you so that you have the opportunity to confirm that what is written reflects what you said, before it is used in my research report. The interview transcripts, summaries and any recordings will be kept securely and destroyed five years after the

research ends. If you elect to take part in a focus group, your confidentiality will be respected in the same way.

What will the project produce?

The information from my research will be used in my PhD thesis. You will not be identified in my report. I may also use the results of my research for conference presentations, and academic publications.

If you accept this invitation, what are your rights as a research participant?

You do not have to accept this invitation if you don't want to. You may ask any questions at any time about the study. If you decide to participate in an interview, you have the right to:

- choose not to answer any question;
- ask for the recorder to be turned off at any time during the interview;
- you may withdraw from the study up until four weeks after your interview;
- read over and confirm the transcript of your interview;
- choose or agree on another name for me to use rather than your real name;

If you agree to be part of a focus group conversation, you have the right to

- * choose not to answer any question
- * ask for the recorder to be switched off at any time during the focus group
- * choose or agree on a name to be used rather than your real name
- * withdraw from the focus group discussion at any time, without needing to explain why
- * if you decide to withdraw from the focus group, any information you have provided will not be able to be withdrawn as it will be part of the discussion with other participants.

If you have any questions or problems, who can you contact?

If you have any questions, either now or in the future, please feel free to contact either:

Student: Name: Suzanne Miller University email address: Suzanne.Miller@vuw.ac.nz [REDACTED]	Supervisor: Name: Dr Robyn Maude Role: Senior Lecturer School: Graduate School of Nursing, Midwifery and Health Phone: 04 4636137 Robyn.Maude@vuw.ac.nz
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What happens next? If you are interested in participating, please phone, email or text me your contact details and I will make contact with you within one week to talk with you about your ongoing involvement in the study.

Human Ethics Committee information

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convener: Associate Professor Susan Corbett. Email susan.corbett@vuw.ac.nz or telephone +64-4-463 5480.



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

INFORMATION SHEET FOR STAFF REGARDING RECRUITMENT OF WOMEN TO THIS STUDY

Thank you for your interest in assisting me with recruitment of participants for this study. Please read this information which outlines the project and the inclusion criteria for selecting women to offer information to about the study.

Who am I?

My name is Suzanne Miller and I am a Doctoral student in the Graduate School of Nursing, Midwifery and Health at Victoria University of Wellington. This research is one aspect of a larger project that will contribute towards my PhD thesis.

Background and aim of this project

At present in Aotearoa/New Zealand, only 23% of first time mothers experience a 'normal' birth using the Ministry of Health definition ie spontaneous onset of labour, no augmentation, no epidural, no episiotomy and spontaneous vaginal birth (Ministry of Health, 2015). Over 30% of first time mothers who labour spontaneously experience augmentation of labour. This aspect of my project seeks to explore the experience of low risk women with spontaneous onset of labour who have given birth for the first time within a tertiary hospital. I am particularly interested in talking with women who have experienced lengthy labours, with and without augmentation using synthetic oxytocin.

This research has been approved by the New Zealand Health and Disability Ethics Committee (17NTA75) and endorsed by the Research Advisory Group – Māori (RAG-M #498).

How can you help?

If you are caring for a woman in labour or on the postnatal ward as an LMC or a core midwife, and they meet the following criteria, it would be appreciated if you would give the woman a First Birth Study Information Pack which is located in either the Birthing Suite or Postnatal area office. Once you have offered the woman the Information Pack, there is nothing further you need to do. The Information Pack contains a sheet which explains the study, and has my contact details if the woman wishes to know more.

Who should you offer an Information Pack about the study to?

Women who have given birth for the first time who:

- went into labour spontaneously (ie not induction)
- are low risk (no obstetric or medical complications such as pre-eclampsia, gestational diabetes, twins/multiples, no conditions for which a consultation has been made under the Referral Guidelines during pregnancy – except a ‘postdates’ consultation prior to spontaneous onset of labour)
- are between 37 and 42 weeks gestation
- planned birth at tertiary hospital (ie not transfers from home or primary unit)
- experienced EITHER augmentation of labour with synthetic oxytocin OR total labour length over 12 hours
- can converse fluently in English

If you have any questions or problems, who can you contact?

If you have any questions, either now or in the future, please feel free to contact either:

Student:

Name: Suzanne Miller

University email address:

Suzanne.Miller@vuw.ac.nz



Supervisor:

Name: Dr Robyn Maude

Role: Senior Lecturer

School: Graduate School of Nursing,
Midwifery and Health

Phone: 04 4636137

Robyn.Maude@vuw.ac.nz

Human Ethics Committee information

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convener: Associate Professor Susan Corbett. Email susan.corbett@vuw.ac.nz or telephone +64-4-463 5480.

APPENDIX D4 – Information Emailed to Staff in Birthing Suite and LMCs about the Observation



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting



Kia ora. My name is Suzanne Miller and I am a midwife and PhD researcher. I am interested in how the tertiary environment affects the experiences of low risk women giving birth for the first time. I will be present in Birthing Suite during April to observe the usual running and activities happening in the ward. This may involve attending midwifery and medical handovers, and being present in the office and workroom.

As well as this, I may ask if I can accompany you to observe a consultation regarding a decision to augment labour, if the woman has consented to having me present. I will not be recording the conversation, but might make a few brief handwritten notes. These notes will be about what I see, and details of your conversations will not be recorded. I will not be taking part in providing clinical care, and any notes I make will not identify anyone involved.

You are free to decline having me present at any given time by requesting that I leave the room, or by conducting any encounter you wish to remain private in an area I am not currently observing in. As a researcher, I will not be providing any clinical care to women, but I will be very happy to help you out with any non-clinical aspects of your work while I am there.

There are no direct or immediate benefits to you from allowing me to observe you as you go about your work. There is a small risk that you could feel self-conscious being observed in this way, and I will do my best to be mindful of your emotional comfort when I am present. As an experienced midwife I am used to the hospital environment and

understand the pressures associated with a busy clinical environment. I aim to be as unobtrusive as possible and remain cognisant of these pressures.

Results

As this is one aspect of a larger study, there will be a delay between my observation and any reporting of results. Results will be reported in my PhD thesis, and will be disseminated via peer-reviewed journal publications and conference presentations.

If you wish to know the results of the study overall once it is completed, Birthing Suite will be sent a link to the thesis which will be held in the Victoria University of Wellington Library.

Human Ethics Committee information

This study has been approved by the xxx Ethics Committee (approval number).

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convener: Associate Professor Susan Corbett. Email susan.corbett@vuw.ac.nz or telephone +64-4-463 5480.

Whanau Care Services

Provide support for whanau, and are available at (04) 806 0948, or Fax(04) 385 5421 Email wcs@ccdhb.org.nz Website www.ccdhb.org.nz

I have a strong research supervision team supporting me. Dr Robyn Maude is a midwife and senior lecturer at the Graduate School of Nursing, Midwifery and Health at Victoria University of Wellington, and Professor Deborah Davis, a midwife also, is Clinical Chair of Midwifery at the University of Canberra.

My contact details are Suzanne.Miller@vuw.ac.nz or [REDACTED]. If you have any further questions about the study please feel free to contact myself or my primary supervisor Robyn.Maude@vuw.ac.nz or [on 4636137; 0274793826](tel:4636137;0274793826)

APPENDIX D5 – Poster for Birthing Suite Office and Workroom - Observation



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting



Kia ora. My name is Suzanne Miller and I am a midwife and PhD researcher. I am interested in observing how the tertiary environment affects the experiences of low risk women giving birth for the first time, especially in relation to labour augmentation. I will be present in Birthing Suite during April to observe the usual activities happening in the ward. This may involve attending midwifery and medical handovers and being present in the office and workroom.

As well as this, I may ask if I can accompany you to observe a consultation/discussion regarding a decision to augment labour, if the woman has consented to having me present. I will not be recording the conversation but might make a few brief handwritten notes. These notes will be about what I see, and details of your conversations will not be recorded. Any notes I make will not identify anyone involved.

You are free to decline having me present at any given time by requesting that I leave the room, or by conducting any encounter you wish to remain private in an area I am not currently observing in. As a researcher, I will not be providing any clinical care to women, but I will be very happy to help you out with any non-clinical aspects of your work while I am there.

I have a strong research supervision team supporting me. Dr Robyn Maude is a midwife and senior lecturer at the Graduate School of Nursing, Midwifery and Health at Victoria University of Wellington, and Professor Deborah Davis, a midwife also, is Clinical Chair of Midwifery at the University of Canberra.

My contact details are Suzanne.Miller@vuw.ac.nz or [REDACTED] If you have any further questions about the study please feel free to contact myself or my primary supervisor Robyn.Maude@vuw.ac.nz or [04 4636137, 0274793826](tel:044636137)

APPENDIX D6 – A3 Poster for Birthing Rooms – Observation.



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

Kia ora. My name is Suzanne Miller and I am a midwife and PhD researcher. I will be present in Birthing Suite during April and would like to observe some conversations between women in labour and their caregivers. I am interested in understanding more about how women giving birth for the first time make decisions during labour.

You may be asked if you would be happy for me to be present in your room to observe such a conversation. I will not be recording the conversation but might make a few brief handwritten notes. I will not be taking part in your clinical care or identifying you in my notes. I will not be present when you give birth, or if you are having any intimate procedures.

You are free to decline having me present, and this will not affect the care you receive at all. No personal information about you will be collected, so your confidentiality will be maintained.

This study has been approved by the Health and Disability (Northern A) Ethics Committee (17/NTA/75/AM02).

My research supervisors are Dr Robyn Maude (Victoria University of Wellington) and Professor Deborah Davis (University of Canberra).

My contact details are Suzanne.Miller@vuw.ac.nz or [REDACTED]. If you have any further questions about the study please feel free to contact myself or my primary supervisor Robyn.Maude@vuw.ac.nz

APPENDIX D7 – Information for Women - Observation



Invitation to Participate

The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting



Kia ora. My name is Suzanne Miller and I am a midwife and PhD researcher. The overall aim of my research is to understand more about how well women giving birth for the first time make decisions during labour when they have chosen to give birth at the tertiary hospital. The study has several parts, and this part involves some observations in the birthing suite.

I have a strong research supervision team supporting me. Dr Robyn Maude is a midwife and senior lecturer at the Graduate School of Nursing, Midwifery and Health at Victoria University of Wellington, and Professor Deborah Davis, a midwife also, is Clinical Chair of Midwifery at the University of Canberra.

Because you are a low risk woman, giving birth for the first time, I am interested in observing a conversation that might occur between you and a midwife or doctor about an intervention (augmentation) that is sometimes offered during labour. You may be asked if you would be happy for me to be in the room to observe such a conversation. This may be for about ten minutes. Your support people will be welcome to stay with you.

I won't be videoing or recording the conversation, but might make a few brief handwritten notes. These notes will be about what I see, and your conversation won't be written about in detail in my thesis. These notes will be kept for ten years, then destroyed.

I will not be providing any of your labour care, and will not identify you in my notes. I will not be present when you give birth, or if you are having any intimate procedures.

It is your choice about whether you agree to participate, and you are free to say no having me present. This will not affect the care you receive at all. You are welcome to consult with family/whanau/support people to help you decide.

No personal information about you is collected, so your confidentiality can be assured. You will not be identified in my PhD thesis or any publications or presentations.

If you would like to meet me before you decide about inviting me to observe the conversation, or to ask me any questions, you can ask your midwife to let me know and I will come and say hello. You will be asked to sign a consent form and will be given a copy to keep.

There are no direct or immediate benefits to you from allowing me to observe a conversation you have with a health professional. There is a small risk that you could feel self-conscious being observed in this way, and I will do my best to be mindful of your emotional comfort if you allow me to be present. As an experienced midwife I am used to being with women during labour and know that calmness and quiet will be important to you. If you agree to me being present, but change your mind once I am with you, you can ask me to leave straight away, and if I have made any notes at that point I will not use them in my study.

Results

As this is one aspect of a larger study, there will be a delay between my observation and any reporting of results. If you wish to know the results of the study overall, you can tick the box on the consent form, providing a contact detail, and once the study is completed, you will be sent a link to the thesis which will be held in the Victoria University of Wellington Library.

Human Ethics Committee information

This study has been approved by the Health and Disability Ethics Committee (Northern A 17/NTA/75/AM02). P.O. Box 5013, Wellington 6011.

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convener: Associate Professor Susan Corbett. Email susan.corbett@vuw.ac.nz or telephone +64-4-463 5480.

Whanau Care Services

Provide support for whanau, and are available at (04) 806 0948, or Fax (04) 385 5421 Email wcs@ccdhb.org.nz Website www.ccdhb.org.nz

My contact details are Suzanne.Miller@vuw.ac.nz or [REDACTED]. If you have any further questions about the study please feel free to contact myself or my primary supervisor Robyn.Maude@vuw.ac.nz or [4636137](tel:4636137); [0274793826](tel:0274793826)

APPENDIX D8 – A5 Flyer for Inclusion in Well Child Book



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

– a PhD study by Suzanne Miller

Have you just given birth to your first baby?

Perhaps while you were in hospital your midwife gave you some information about my study, but life has gotten busy... or maybe this is the first you have heard of it...

If you meet the following criteria, and would be interested in talking with me about your experience of having your baby at the hospital, I would love to hear from you.

If you:

- Have had your first baby recently, say, in the last three months
- Were 'low risk' when labour began
- Went into labour by yourself – that is, did not have your labour induced
- Were between 37 and 42 weeks gestation when labour began
- Had a long labour (more than twelve hours from when your contractions began)
- Can converse in English

... then you are someone I would like to talk with ...

The study has ethical approval from the Health and Disability Ethics Committee (17NTA75).

If you would like to know more about the study, please phone or text me on [REDACTED] or email me at Suzanne.Miller@vuw.ac.nz and I can send you some more information to help you decide if you'd like to take part.

APPENDIX D9 – Poster for Display in Medical and Well Child Provider Clinic Rooms



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting – a PhD study by Suzanne Miller

Have you just given birth to your first baby?

Perhaps while you were in hospital your midwife gave you some information about my study, but life has gotten busy... or maybe this is the first you have heard of it...

If you meet the following criteria and would be interested in talking with me about your experience of having your baby at the hospital, I would love to hear from you.

If you:

- Have had your first baby recently, say, in the last three months
- Were ‘low risk’ when labour began
- Went into labour by yourself – that is, did not have your labour induced
- Were between 37 and 42 weeks gestation when labour began
- Had a long labour (more than twelve hours from when your contractions began)
- Can converse in English

... then you are someone I would like to talk with ...

The study has ethical approval from the Health and Disability Ethics Committee (17NTA75).

If you would like to know more about the study, please phone or text me on [REDACTED], or email me at Suzanne.Miller@vuw.ac.nz

and I can send you some more information to help you decide if you’d like to take part.

First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]	First Birth Study Suzanne.Miller@vuw.ac.nz Phone [REDACTED]
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APPENDIX E1 – Consent Form – Women - Interviews



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

CONSENT TO INTERVIEW

This consent form will be held for five years.

Researcher: Suzanne Miller, PhD Candidate, Victoria University of Wellington.

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to take part in an audio-recorded interview.

I understand that:

- I may withdraw from this study at any time until four weeks after the interview, and any information that I have provided will be returned to me or destroyed.
- The information I have provided will be destroyed 10 years after the research is finished.
- Any information I provide will be kept confidential to the researcher and the supervisor. I understand that the results will be used for a PhD thesis, and a summary of the results may be used in academic reports and/or presented at conferences.
- My name will not be used in reports, nor will any information that would identify me.

A copy of the transcript of the interview will be send to me prior to the start of the analysis so I have an opportunity to confirm that it reflects my original conversation.

- I would like to receive a copy of the final report and have added my email address below. Yes No

Whanau Care Services

Provide support for whanau, and are available at (04) 806 0948, or Fax(04) 385 5421 Email wcs@ccdhb.org.nz Website www.ccdhb.org.nz

Signature of participant: _____

Name of participant: _____

Date: _____ Contact details: _____



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

CONSENT TO INTERVIEW – HEALTH PROFESSIONALS

This consent form will be held for five years.

Researcher: Suzanne Miller, PhD Candidate, Victoria University of Wellington.

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to take part in an audio-recorded interview.

I understand that:

- I may withdraw from this study at any time until four weeks after the interview, and any information that I have provided will be returned to me or destroyed.
- The information I have provided will be destroyed 5 years after the research is finished.
- Any information I provide will be kept confidential to the researcher and the supervisor. I understand that the results will be used for a PhD thesis, and a summary of the results may be used in academic reports and/or presented at conferences.
- My name will not be used in reports, nor will any information that would identify me.

A copy of the transcript of the interview will be sent to me prior to the start of the analysis so I have an opportunity to confirm that it reflects my original conversation.

- I would like to receive a copy of the final report and have added my email address below. Yes No

Whanau Care Services

Provide support for whanau, and are available at (04) 806 0948, or Fax(04) 385 5421 Email wcs@ccdhb.org.nz Website www.ccdhb.org.nz

Signature of participant: _____

Name of participant: _____

Date: _____

Contact details: _____



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

CONSENT FOR FOCUS GROUP PARTICIPATION

This consent form will be held for five years.

Researcher: Suzanne Miller, PhD Candidate, Victoria University of Wellington.

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to take part in an audio-recorded interview.

I understand that

- I will be asked to sign a Confidentiality Agreement prior to commencing the focus group discussion.
- I may withdraw from the focus group discussion at any time without needing to explain why.
- The information I have contributed will be destroyed 5 years after the research is finished.
- Any information I contribute will be kept confidential to the researcher and the supervisor. I understand that the results will be used for a PhD thesis, and a summary of the results may be used in academic reports and/or presented at conferences.
- My name will not be used in reports, nor will any information that would identify me.
- I would like to receive a copy of the final report and have added my email address below. Yes No

Whanau Care Services

Provide support for whanau, and are available at (04) 806 0948, or Fax(04) 385 5421 Email wcs@ccdhb.org.nz Website www.ccdhb.org.nz

Signature of participant: _____

Name of participant: _____

Date: _____

Contact details: _____



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

CONSENT FOR OBSERVATION OF CLINICAL CONSULTATION

This consent form will be held for five years.

Researcher: Suzanne Miller, PhD Candidate, Victoria University of Wellington.

- I have read the Information Sheet and I have had an opportunity to ask questions about the study. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to having Suzanne Miller, midwife researcher, present during a clinical consultation while I am in birthing suite.

I understand that:

- I may ask the researcher to leave the room at any time, without explanation.
- The researcher may make some handwritten notes during the consultation, and that these notes will not include any information that identifies me or the health professional(s) involved.
- These notes will remain confidential to the researcher and her supervisors. I understand that these notes may be used for a PhD thesis, and a summary of the results may be used in academic reports and/or presented at conferences.
- My name will not be used in reports, nor will any information that would identify me.
- I would like to receive a link to the final thesis report and have added my email address below. YES / NO

Whanau Care Services

Provide support for whanau, and are available at (04) 806 0948, or Fax(04) 385 5421
Email wcs@ccdhb.org.nz Website www.ccdhb.org.nz

Signature of participant: _____ Name of participant: _____

Date: _____

Contact details: _____

APPENDIX F1 – Proposed Interview Schedule – Women



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

Proposed semi-structured interview schedule.

Initial greeting and congratulations, revisiting of aims and purpose of the interview and participant's rights, and obtaining of written consent. The course of the conversation will be largely determined by the interviewee, with the researcher prompting or seeking clarification along the way. If topics of interest are not covered, then a further question may be asked.

I wonder if you could begin by telling me a bit about what influenced your decision to have your baby at the tertiary hospital?

Could you please tell me a bit about your birth, from when you first thought you might be in labour, until when your baby was born...

How was labour the same/different from what you expected it to be like?

How did it come about that you went 'on the drip'? (if augmentation occurred)

Did they suggest to you that going 'on the drip' was an option – how come you chose not to? (if not augmented).

Do you recall what information you were given about augmentation?
(by your LMC during pregnancy, by your midwife or the doctor during labour)

Who explained the process to you at the time and got your permission to go ahead with the augmentation?

How important was it for you to be involved in making the decision at the time?

How do you feel overall about your birth experience now?

What were the things that helped you most when you were in labour?

Possible other areas to explore if indicated:

Onset of labour and admission to hospital – visited at home prior to admission?

Experience of pain and pain relief

Communication with staff/support people – relationships

Did you see yourself as low risk at the start of labour?

Do you feel you were given enough time to make decisions in labour?

Did you feel well prepared for your birth?

APPENDIX F2 – Proposed Interview Schedule – Health professionals – Interviews and Focus Groups



The Culture of First Birth in Aotearoa/New Zealand: Primary Birth in a Tertiary Setting

Possible semi-structured interview/focus group questions for health professionals.

What springs to mind when I say “primip in labour?”

Have you ever been continuously present with a woman having her first baby throughout the entire labour, from early labour through to placental birth? How do you tell when labour ‘establishes?’

How did you come to learn about normal progress in labour for women giving birth for the first time?

How do you support women who are experiencing a longer labour?

How do you use the hospital guidelines in relation to labour dystocia?

What do you think about your own part in the decision to augment labour?

When do you talk to women about augmentation of labour?

What do you tell them?

In what ways do women have a ‘say’ during labour when it comes to augmentation?

What things influence your decision to offer augmentation?

How do you collaborate with other people involved in the woman’s care?

Are there other things that happen at the hospital that contribute to decisions about augmentation?

Is it still a ‘normal birth’ if the woman has augmentation and proceeds to a spontaneous vaginal birth?