How do midwives and obstetricians communicate at the primary/secondary interface?

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Declaration concerning thesis presented for the degree of Master of Midwifery

I, Rachel Cassie, of 9 Houhere Place, Hamilton, solemnly and sincerely declare, in relation to the thesis entitled:

How do midwives and obstetricians communicate at the primary secondary interface?

a/ That the work was done by me personally

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Abstract

Interprofessional communication is a critical component of safe maternity care. The literature reports circumstances in New Zealand and overseas when interprofessional collaboration works well between midwives and obstetricians as well as descriptions of unsatisfactory communication between the two professions.

This qualitative research focused on communication between community based LMC (lead maternity carer) midwives and public hospital obstetricians/registrars at a New Zealand District Health Board. The objectives were to define effective collaboration from research participants' perspective, to identify barriers and challenges to good communication, to generate proposals to foster positive collaboration, and to explore participants' understanding and use of the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines).

Eight primary care midwives, three obstetricians and two obstetric registrars were interviewed about their interactions at the primary secondary interface and their understanding of and use of the Referral Guidelines. The theoretical perspective was Appreciative Inquiry and data was analysed using thematic analysis. Results indicated usually positive interprofessional interactions. Participants valued the Referral Guidelines but also reported some limitations to their applicability.

Dominant themes that emerged were the need to negotiate differing philosophies, to clarify blurred boundaries that sometimes led to lack of clear lines of responsibility, and the importance of three-way conversations. When three-way communication between midwife, obstetrician/registrar and woman occurred effectively, communication was usually optimal. Three-way communication was pivotal in negotiating philosophical difference and clarifying blurred boundaries. The research findings lead to recommendations on promotion of optimal communication.

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Chapter 1. Introduction

1.1 Introduction

When women transfer from primary to secondary or tertiary maternity care, this represents a time when pregnancy and birthing has digressed from normal, sometimes acutely. This can be a stressful and risky time for women, and the interactions between the health professionals involved have a critical influence in maintaining the safety and wellbeing of women and babies. In New Zealand most primary maternity care is carried out by community-based midwives, known as LMC (Lead Maternity Carer) midwives, and secondary or tertiary maternity care is the responsibility of obstetricians and allied medical specialists, supported by hospital based (core) midwives.

Terms for interactions between primary care midwives and obstetricians are set by the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) (Ministry of Health [MoH], 2012). The current study aims to better understand the primary secondary interface interactions of LMC midwives and obstetric doctors (obstetricians and registrars), to evaluate the use and understanding of the Referral Guidelines by these two professional groups, and to discover means of promoting positive interprofessional interactions between them.

This chapter introduces the research topic: Communication between primary care midwives and obstetricians at the primary secondary interface in New Zealand. Following outlining the research aims and communication definitions, the significance of a new study evaluating interprofessional communication between midwives and obstetricians at the point of referral and transfer is examined. Relevant legislation and guidelines influencing communication practices in maternity care in New Zealand are discussed. The maternity workforce is described, and a definition of the primary secondary interface is proposed.

1.2 Research question and aims

The research question driving this thesis is: how do midwives and obstetricians communicate at the primary secondary interface? To answer this question, the two aims of the research are:

- To describe how communication between LMC midwives and obstetricians happens at the primary secondary interface in New Zealand, with emphasis on what comprises positive communication and how to promote this.

- To describe the understanding and use of the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) (MoH, 2012) by New Zealand primary care midwives and obstetricians in their communications with each other in practice.

Appreciative Inquiry was chosen as the theoretical approach to ensure the study emphasis was on discovering existing positive components of collaboration and means of promoting these components

1.3 Definitions

Definitions are included to clarify the research intentions.

Communication is defined as "the act or an instance of communicating; the imparting or exchange of information, ideas or feelings" (Collins English Dictionary, 2007, p. 343).

Collaboration is defined as "the act of working with another or others on a joint project" (Collins English Dictionary, 2007, p. 333).

In this research these terms are highly connected. They are used both simultaneously and interchangeably throughout the thesis to describe the interactions between midwives and doctors at the primary and secondary interface where professionals of different disciplines must work together to provide optimal maternity care.

LMC refers to community based LMC midwife unless otherwise specified for the purposes of this thesis.

1.4 Current knowledge on interprofessional communication in maternity care

Effective communication between midwives and obstetricians to negotiate paths through complexity in maternity care is critical for safety of mothers and babies. Poor communication has been cited as contributing to adverse outcomes in New Zealand maternity care (Health and Disability Commissioner [HDC], 2019a, 2019b). Good communication practices should promote effective collaboration between the two professions.

Studies evaluating communication and collaboration between midwives and obstetricians were found in the academic literature from New Zealand and internationally. These studies described situations where successful collaboration between the two professions occurred, but also revealed some tensions between midwives and obstetricians (see Chapter 2). New

Zealand research gave perspective on interprofessional communication in maternity care from the midwife's point of view and from the perspective of women. (Grigg, Tracy, Schmied, Monk, & Tracy, 2015; Skinner, 2011; Skinner & Foureur, 2010). Four international studies evaluated obstetric perspectives on interprofessional communication with midwives (Behruzi, Klam, Dehertog, Jimenez, & Hatem, 2017; Matthias, 2010; Ratti, Ross, Stephanson, & Williamson, 2014; Romijn, Teunissen, de Bruijne, Wagner, & de Groot 2018). No research into perspectives of New Zealand obstetricians regarding interprofessional communication with LMC midwives was found, a gap in knowledge that the current study aimed to fill.

Difficulties arise in comparing New Zealand primary secondary interface communication practices with overseas practices, as New Zealand's maternity system has unusual features. The service is midwife-led, with a high degree of professional autonomy for LMC midwives. While general practitioners (GPs) and privately funded obstetricians may also act as LMCs, the majority of LMCs are community-based midwives (MoH, 2014b).

Probably the most unusual feature of New Zealand midwifery care is that LMC midwives commonly continue to provide midwifery care for high risk women after secondary care referral occurs, both antenatally and during labour and birth (Skinner & Foureur, 2010). No other New Zealand primary health care providers (for example GPs or dentists) have ongoing involvement and responsibility when clients are admitted to secondary care hospitals. Autonomous midwifery practice occurs similarly to New Zealand in the Netherlands (Warmelink, Wiegers, de Cock, Klomp, & Hutton, 2017) and to a lesser degree in areas in the United Kingdom, Australia, the United States and Canada, where medical-led maternity care is more usual (Downe, Finlayson, & Fleming, 2010; Perdion et al., 2013; Ratti et al., 2014; Reiger & Lane, 2009). However, in overseas maternity systems, primary care midwives more commonly hand over care to secondary care midwives or obstetric nurses following secondary care referral (Grigg & Tracy, 2013; Skinner, 2011). Referral to obstetric services in New Zealand often leads to shared responsibility between LMC midwives and the secondary care team for ongoing midwifery and obstetric care components. Thus, collaboration at the primary secondary interface between LMC midwives and obstetricians is vital to ensure roles are negotiated and safe care occurs. Improved understanding of communication practices in the context of New Zealand's unique maternity system is important to identify ways to maintain and enhance effective collaboration.

1.5 Importance of good communication

Effective communication between health professionals was identified as vital to safe health care delivery. Kohn, Corrigan, and Donaldson (2000) found that medical errors caused 44,000 to 98,000 deaths annually in United States (U.S.) hospitals and reported that communication failures were a leading factor in many adverse events. In New Zealand, similar error rates have been found across all health disciplines (Davis et al., 2002). Davis et al. (2002) do not report on causes of error. These two studies related to hospital admissions across all disciplines, not only maternity care.

Within maternity care, incidence of adverse events and role of unsatisfactory communication is similar. An international review article on handover of care in maternity reported obstetrics and gynaecology as overrepresented in adverse events due to poor handover of care (Spranzi, 2014). In the United Kingdom (U.K.) and Australia, communication failures were also implicated in adverse outcomes and complaints in maternity care (Downe et al., 2010; Reiger, 2011).

In New Zealand, the Perinatal and Maternal Mortality Review Committee (PMMRC) (PMMRC, 2018) reports on maternal and perinatal mortality, analyses data and gives recommendations for improving maternity care. The PMMRC (2018) reported on perinatal loss in 2016, citing communication failures as implicated in ten potentially avoidable instances of perinatal loss. The Health and Disability Commissioner Act 1994 protects the rights of New Zealand healthcare consumers and gives investigative powers to the HDC. The HDC cited communication errors for midwives and obstetricians as contributary to adverse outcome in four maternity cases from April 2018 to March 2019 (HDC, 2019). As communication failures contribute significantly to adverse outcomes and complaint, research into what constitutes good communication practice and how to promote this could improve safety and satisfaction with care for women and babies.

1.6 Legislation, guidelines and frameworks influencing collaboration in maternity care

New Zealand maternity care practises are governed, regulated and influenced by various legal requirements, professional guidelines and frameworks which influence collaborative practises between LMC midwives and obstetricians. The following represent some major influences on practise with a focus on primary care definitions and limitations.

1.6.1 Guidelines for consultation with obstetric and related medical services (Referral Guidelines)

The MoH publishes guidelines for referral from primary to secondary care in New Zealand maternity care (MoH, 2012). Two studies identified that New Zealand LMC midwives found the Referral Guidelines useful in decision making (Norris, 2017; Skinner & Foureur, 2010). No in-depth analysis of midwifery or obstetric understanding or use of the Referral Guidelines was undertaken in these two studies. One objective of the current study was to explore the understanding and use of the Referral Guidelines by participants. Therefore, the Referral Guidelines and the process of their production are discussed in depth in Chapter 2.

1.6.2 Section 88 of the New Zealand Public Health and Disability Act 2000, in the Primary Maternity Services Notice 2007

The terms whereby community midwives and other LMCs are contracted to provide autonomous maternity care are defined under Section 88 of the New Zealand Public Health and Disability Act 2000, in the Primary Maternity Services Notice 2007 (hereafter referred to as 'Section 88' as this is how study participants usually referred to it). Section 88 funds LMCs to provide primary maternity care and contains a list of exclusions from the definition of primary care. Section 88 became law in 1996 and was most recently updated in 2012 (MoH, 2012). Section 88 resulted in introduction of the current Lead Maternity Care (LMC) system whereby one practitioner (midwife, GP or obstetrician) had primary responsibility for each woman's pregnancy, birth and postnatal care to 6 weeks postpartum, giving legislative commitment to continuity of care.

Section 88 defines primary maternity services in four categories. These categories are:

1. Lead maternity care,
2. Maternity non-LMC services in addition to lead maternity care,
3. Care sought on a casual basis outside LMC care,
4. Specialist medical maternity services, recognising that some primary maternity care is provided by private obstetricians and some specialist services such as laboratory testing and ultrasound are accessed by LMCs during primary care (MoH, 2012).

The list of exclusions assists with defining limits of primary maternity care and scope of an LMC, but primary maternity services are loosely defined, leaving potential for differing interpretations of what comprises primary maternity care.

Maternity care provided by a midwife or GP LMC is fully government funded for New Zealand citizens and some other groups e.g. long-term residents and Embassy staff, via the

MoH. Under Section 88, midwives and GPs cede the right to charge a fee for maternity care. Private sector obstetricians may claim the same funding under Section 88 for providing LMC care but retain the right to charge for primary maternity care in addition to Section 88 payments. Section 88 requires that LMCs ensure provision of all primary antenatal care, care from established labour until two hours after the birth of the placenta, and postnatal care until six weeks postpartum for well mothers and babies under their care, either personally or through delegation to other appropriate health professionals (MoH, 2007, 2012).

An unusual situation exists in New Zealand whereby LMC midwives may choose to provide secondary midwifery care in collaboration with obstetricians, for example, care for a woman receiving an epidural or oxytocin augmentation (Skinner & Foureur, 2010). District Health Boards (DHBs) receive separate government funding to provide secondary midwifery care delivered by core midwives. As Section 88 does not fund provision of midwifery care by midwife LMCs when a woman requires secondary care obstetric services, a highly anomalous situation exists whereby any secondary maternity care provision by LMC midwives is unremunerated (MoH, 2007).

1.6.3 Health Practitioners Competency Assurance Act 2003 (HPCAA)

Under the HPCAA (2003), health practitioners must practise within their scope, set by their governing body, in the case of study participants, the Midwifery and Medical Councils of New Zealand, respectively (MoH, 2003). The midwifery scope of practise is limited to care for mothers and babies throughout pregnancy, labour and birth and the first six weeks postpartum (Midwifery Council of New Zealand [MCNZ], 2010; New Zealand College of Midwives [NZCOM], 2015). Provision of secondary midwifery care in collaboration with obstetricians is within the scope of practise of all New Zealand registered midwives. LMC midwives act autonomously to provide primary maternity care and in collaboration with obstetricians and other specialists when complexity arises (MC, 2010).

1.6.4 The 1990 Amendment Act to the Nurses Act 1977 (1990) and the Nurses Act (1971)

The 1990 Amendment to the Nurses Act 1977 returned the right to autonomous practise for midwives (MoH, 1990). This right was removed with the passing of the Nurses Act (1971), despite lack of evidence that a medical-led service was safer than a midwifery-led service (Donley, 1998). From 1971 to 1990, New Zealand midwives were required to work under supervision of a doctor.

In New Zealand, midwives have always provided all midwifery labour and birth care, but under the Nurses Act (1971), midwives could not make autonomous decisions, instead being required to keep a GP or obstetrician informed of progress and any complexity. The doctor typically attended primary care labours when birth was imminent or in emergencies (Donley, 1998). Reinstatement of autonomous midwifery practice resulted in changed dynamics at the primary secondary interface. Formerly, GPs led most primary maternity care, and primary secondary interface interactions occurred between GPs and obstetricians. After midwives regained professional autonomy, increasing numbers of GPs chose to exit maternity care. By 2014, only 0.5% of New Zealand births were attended by a GP (MoH, 2014b). The passing of the 1990 Amendment to the Nurses Act 1977 meant both midwives and obstetricians had to develop new primary secondary interface communication pathways to adapt to a system that changed relatively abruptly from a doctor-led model to a midwife-led model of care.

1.6.5 Te Tiriti o Waitangi (The Treaty of Waitangi)

New Zealand is recognised as a bicultural society, with the rights of Māori, the indigenous people of New Zealand, protected legally by Te Tiriti o Waitangi (King, 2003). Te Tiriti o Waitangi, signed in 1840, was the founding document of British colonial New Zealand and remains a legally binding contract between Māori, the indigenous people of New Zealand, and the British government (Orange, 1989). The third article of the treaty provides for protection of Māori by the crown, giving Māori all the rights and privileges of British subjects (King, 2003). This includes an obligation to ensure Māori have equitable access to health care, including maternity care. This obligation is recognised by the MoH in the New Zealand Maori Health strategy (MoH, 2014a). The principles of Turanga Kaupapa guide New Zealand midwifery practice supporting the cultural needs of Māori women and their whanau (families). These principles were developed by Nga Maia Māori Midwives Aotearoa in 2006 (NZCOM, 2012). Both MCNZ and New Zealand College of Midwives (NZCOM) recommend following the principles of Turanga Kaupapa, recognising and respecting the importance of Māori culture in maternity care and honouring the principles of Te Tiriti o Waitangi (MCNZ, 2016; NZCOM, 2015).

In the 2018 census, 15.1% of New Zealand's population identified as Māori (Statistics New Zealand, 2018). In 2014, Midwives identifying as Māori comprised 9% of the working population of midwives in New Zealand (MC, 2016), and in 2015, doctors identifying as Māori comprised 2.7% of the medical workforce (MoH, 2015). The current research is relevant to Māori because Māori women continue to have higher incidences of various

complications of pregnancy and birth (PMMRC, 2018). The PMMRC (2018) identified that Māori women along with Pasifika and Indian women have a higher risk of stillbirth than the general population and Māori women are overrepresented in neonatal death risk (PMMRC, 2018). Thus, Māori women often have greater need of secondary maternity services than women of other ethnicities. Good communication between health professionals is vital for good maternity care, so research improving knowledge of communication between midwives and obstetricians at the primary secondary interface and how to enhance this has relevance for Māori women's health.

1.7 The midwifery partnership model of care

A strong principle driving New Zealand midwifery care is the midwifery partnership model of care, recognising the unique cultural and life experience of each woman (Guilliland & Pairman, 2010). The principle of this model of care is that decisions are made in partnership between women and midwives. Keeping the woman, baby and whanau central to care is pivotal. The current study focused on relationships between LMC midwives and obstetricians. The midwifery partnership model of care is recognised in the Referral Guidelines, which stipulate that care should be women centred. This should remind both midwives and obstetricians that their interprofessional communications need to include women in decision making processes about their care.

1.8 The workforce

Since midwifery autonomy was regained in 1990, there has been a change in the provision of primary maternity care increasing the importance of collaboration between midwives and obstetricians. In 1990, most maternity care was provided by GPs but since midwifery autonomy was reinstated, the percentage of women choosing a midwife LMC has gradually increased (Grigg et al., 2013). By 2014 midwives comprised 93.4% of LMCs, while 6% were private sector obstetricians (MoH, 2014b). In 2016 there were 3023 practising midwives in New Zealand (MC, 2016). LMC midwives claiming under Section 88 comprised 32.7% of this total with a further 3.9% providing care similarly to LMC midwives in employed situations, a total of 36.6%. Core midwives comprised 50.7% of the total. The remainder were engaged in education, administration, policy, research, management, leadership, or other miscellaneous midwifery roles.

Core midwives are employed by DHBs and primary birthing units. In secondary and tertiary hospitals, core midwives provide midwifery care for women with usually complex needs, in collaboration with obstetric staff and midwife LMCs (NZCOM, n.d.). In primary units, core

midwives provide autonomous backup midwifery care supporting LMCs and birthing women, and early postnatal care, typically for the first 48 hours after birth. In some regions they have a role in antenatal or later postnatal care, or birth care for women without an LMC (Grigg & Tracy, 2013). New Zealand LMC midwives have prescribing rights, access to laboratory and ultrasound services, access to hospitals and equal remuneration with GPs for primary maternity care (Grigg & Tracy, 2013).

In 2015, of 14,678 registered medical practitioners in New Zealand, 405 were obstetricians (Medical Council of New Zealand, 2018). Obstetricians within the publicly funded maternity care system provide almost exclusively secondary or tertiary care, becoming involved in care when complexity arises. A small workforce of private obstetricians act as LMCs providing obstetric care including primary care (MoH, 2014b). Anecdotally most private obstetricians use the services of core midwives to provide the midwifery component of labour and birth care, and contract LMC midwives to carry out bookings, birth plan development and postnatal care. Some obstetricians work both in public and private maternity care.

1.9 Defining the primary secondary interface in New Zealand

As the current study focuses on primary secondary interface interactions, a definition of the primary secondary interface in maternity care is needed. To define the primary secondary interface necessitates definition of primary and secondary care. The Referral Guidelines (MoH, 2012) are intended to clarify primary secondary interface interactions. Section 88 (MoH, 2007) defines primary care in terms of what is contracted for and remunerated.

The Referral Guidelines aid in defining secondary care, containing a list of conditions deemed to require recommendation of referral to secondary care services (MoH, 2012). The Referral Guidelines define a secondary care hospital as a hospital where obstetric, paediatric, anaesthetic, radiological, laboratory and neonatal services are available. The Referral Guidelines define a primary care provider as “A health care provider who works in the community and who is not a specialist for the purposes of these guidelines” (MoH, 2012, p. 31). LMC midwives are considered primary care providers. This definition encompasses services provided by LMC midwives in the community and in primary birthing units. The definition is inaccurate because many LMC midwives also provide primary care within secondary and tertiary hospitals and may provide varying amounts and types of secondary midwifery care in collaboration with obstetricians.

Section 88 lists exclusions from the definition of primary care and defines primary care as including services provided by LMC midwives, without defining what these services are. Primary health services are defined as "… the services specified in the service specifications for essential primary health care services available from the Ministry of Health" (MoH, 2007, p. 1044). A search of definitions on the MoH website revealed this definition of primary health care: "Primary health care relates to the professional health care provided in the community, usually from a general practitioner (GP), practice nurse, nurse practitioner, pharmacist or other health professional working within a general practice" (MoH, 2018, para. 1). This definition does not exclude midwives but does not name them and ignores the fact that LMC midwives are autonomous practitioners working independently of general practice. Thus, the Referral Guidelines, Section 88 and MoH definitions leave lack of clarity as to what primary maternity care is, potentially allowing confusion as to the limits of care contracted for by LMC midwives.

A more straightforward definition for primary maternity care is offered by Skinner and Foureur (2010) "care that is provided when no obstetric input is required" (p. 29). Skinner and Foureur (2010) define primary maternity care in the New Zealand context. This definition was most relevant for the purposes of this research, so this was the definition used.

For the purposes of this research, the primary secondary interface is defined as all circumstances where any aspect of maternity care moves beyond the scope of primary care and requires communication and collaboration between midwives or other LMCs and obstetricians or allied specialists, whether verbal, written or by other modality.

1.10 Researcher perspective

I am a practising New Zealand educated midwife who graduated in 2008. Most of my midwifery career has been as an urban LMC in New Zealand in the study DHB region, with two brief periods as a core midwife at the regional tertiary hospital in the study region. As an LMC I have usually positive experiences of primary secondary interface interactions with obstetricians. However, I have experienced frustrations when decisions relating to birth plans for women that I was LMC for were made by the obstetric team without consultation with me, and with delayed or incomplete feedback from antenatal clinic and the Women's Assessment Unit (WAU). Anecdotally, midwifery colleagues reported similar frustrations. However, I am in the unusual position of also having a medical degree and having practised medicine for 15 years between 1985 and 2000, including 10 years as a GP and 5 as a resident medical officer (RMO). Two years as RMO were spent as a medical and a paediatrics

registrar, part of which role included receiving calls about admissions from GPs. Therefore, I have experience and understanding of primary secondary interface interactions from primary and secondary perspectives and from midwifery and medical perspectives, so it is likely that my perception of the interactions between the two professions is different to other midwives.

1.11 Summary

Effective interprofessional communication and collaboration are important factors in good outcomes from maternity care. Poor communication is one factor that can contribute to adverse outcomes. Several key documents defining quality of practice and delineating responsibilities in maternity care have been discussed. The workforce has been described and the primary secondary interface in maternity care defined. The principle of women-centred care and the midwifery partnership model of care have been introduced. Most women in New Zealand's maternity care system receive care from community LMC midwives who have professional autonomy. When pregnancy related complexity arises, LMC midwives are required to recommend referral to obstetricians, but may retain a midwifery role after referral. This necessitates ongoing collaboration between the two professions to provide safe, effective maternity care. This study aims to describe how communication between LMC midwives and obstetricians happens at the primary secondary interface in New Zealand, and to describe the understanding and use of the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) (MoH, 2012) by New Zealand primary care midwives and obstetricians in their communications with each other in order top to build on knowledge about what constitutes effective communication and collaboration between midwives and obstetricians at the primary secondary interface and how best to facilitate this.

In Chapter 2, the literature review of current knowledge on interprofessional collaboration between midwives and obstetricians, the Referral Guidelines and handover of care is presented. Chapter 3 outlines research methodology. Chapters 4-6 address research findings organised into dominant themes by the researcher. Finally, Chapter 7 gives analysis of research findings and recommendations to promote positive communication and collaboration between LMC midwives and obstetricians.

Chapter 2. Literature review

2.1 Introduction

This chapter outlines the methods whereby relevant literature from New Zealand and overseas, related to interactions between midwives and obstetricians was searched to describe current knowledge on communication and collaborative practice. Factors leading to successful collaboration and those leading to unsatisfactory relationships are examined. The Referral Guidelines are critiqued as a core document underpinning communication in maternity care in New Zealand and a focus of the current study. Literature relevant to handover of care is introduced. From the sourced literature, gaps in knowledge on communication and collaboration between midwives and obstetricians that the current study could address are identified.

2.2 Literature review

A search of academic literature used five databases available through the Robertson Library at Otago Polytechnic; PubMed, ProQuest, Google Scholar, CINAHL and the Cochrane database. Initial search involved the keywords of 'primary secondary interface', 'interprofessional communication or collaboration', 'midwifery', 'obstetrics', 'maternity care', 'professional conversations', 'maternity referral guidelines', and 'clinical guidelines'. Only articles published after 1999 were included because of likely greater comparative relevance to current New Zealand maternity care circumstances. Google Search was used to find legislation, guidelines, frameworks and workforce surveys. Reference lists of articles were searched for related literature. Two New Zealand articles (Skinner & Foureur, 2010; Skinner, 2011) and fourteen overseas articles (Beasley, Ford, Tracy & Welsh , 2012; Behruzi et al., 2017; Chang Pecci et.al., 2012; Downe et al., 2010; Lane, 2012; Matthias, 2010; Ogburn et.al., 2012; Perdion et al., 2013; Ratti et al., Reiger & Lane, 2009; Romijn et al., 2018 Shaw, Hamilton, & McCullogh, 2013; Stevens, Witmer, Grant, & Cammarano, 2012; Warmelink et al., 2017), evaluating collaboration between midwives and obstetricians were identified. A third New Zealand article (Grigg et al., 2-15) addressing transfer of care from primary to secondary from the woman's perspective was included as it allowed indirect inferences on communication practices between LMCs and obstetricians. These three New Zealand studies (Appendix 1) and fourteen international studies (Appendix 2) were evaluated, to identify factors promoting successful interprofessional collaboration, and barriers to effective collaboration. The position statements of the respective governing bodies for midwifery and New Zealand, NZCOM and the Royal Australian and New

Zealand College of Obstetricians (RANZCOG) and the Midwifery Standards of Practice (NZCOM, 2015) are evaluated for their contribution to communication and collaboration and to philosophical standpoints of the two professions. The contribution of the Standards of Midwifery Practice to collaboration is discussed.

The two New Zealand articles addressing primary secondary interface interactions between LMC midwives and obstetricians also contained findings relating to the Referral Guidelines. Additionally, five international articles pertaining to development, use and reliability of guidelines for clinical practice were found. Analysis of these seven publications was used to evaluate the Referral Guidelines.

As the current study progressed it emerged that communication from obstetrician to midwife was often indirect and that intermediaries in communication (usually core midwives) were relevant to the study. Accordingly, the literature search was expanded to include intermediaries or chains of communication in maternity care. No literature was found on intermediaries in communication in maternity care. Two New Zealand studies were found with relevance to LMC midwife to core midwife communication (Fergusson, Smythe, & McAra-Couper, 2010; Norris, 2017). The first addressed handover between LMC and core midwives, and the second examined experiences of core midwife coordinators in delivery suites, referred to as ACMMs (Associate Charge Midwifery Managers) in the current study. On expanding to include handover of care and teamwork the search yielded a review article relating to handover of care in maternity hospital settings (Spranzi, 2014). Further widening of the search criteria to include medical and nursing handover in hospital settings identified four articles with relevance to chains of communication in healthcare (Fealy et al., 2016; Guise et al., 2016; Lutgendorf et al., 2017; Madden, Sinclair & Wright, 2011). These five articles are discussed under the heading Handover of care (p. 43).

2.3 Successful collaboration between midwives and obstetricians

2.3.1 Successful collaboration

Amongst the literature in Appendix 2 there are descriptions of successful collaboration between midwives and obstetricians in New Zealand and overseas (Beasley, Ford, Tracy, & Welsh, 2012; Chang-Pecci et al., 2012; Ogburn et al., 2012; Perdion et al., 2013; Romijn et al., 2018; Skinner, 2011; Skinner & Foureur, 2010; Stevens et al., 2012). These articles were evaluated to describe current knowledge of New Zealand referral practices and to understand what factors were associated with positive interprofessional communication.

2.3.2 New Zealand referral practices

The referral and interprofessional collaboration practices of New Zealand LMC midwives were evaluated in a nationwide postal survey (Skinner & Foureur, 2010). Participants included 433 LMC midwives, covering referral data for 4,251 women. Findings revealed 35% of women required consultation with secondary care with 43% of these referrals requiring transfer of care. Midwives continued to provide care in 72% of instances when transfer of care occurred. This meant that rather than transfer of responsibility, clinical responsibility was shared, with LMC midwives providing midwifery components of secondary care. Skinner and Foureur (2010) reported predominantly satisfactory relationships between LMC midwives and obstetricians with 72% of LMCs reporting feeling supported by obstetricians to continue care after transfer of clinical responsibility. Nearly a quarter said there was room for improvement, and 14% felt unsupported by obstetricians. Skinner and Foureur (2010) identified that while there was significant literature on the components of positive collaboration between the two professions, there was very little literature on how to promote this. This identified a need for further research to define and promote successful collaboration, which the current study aims to address.

Skinner (2011) undertook a mixed method study, which included further analysis of the data set of Skinner and Foureur (2010) and the addition of six focus groups involving 32 LMC midwives throughout New Zealand. Participants were asked about their referral practices. Skinner reported that LMC midwives attended 40% of first secondary care clinic appointments with women. LMC midwives provided midwifery care for women across all risk spectrums. A strong commitment to being 'with women' through continuity of care was a driver for these midwives to provide secondary midwifery care. This finding demonstrated that women-centred care was a priority for these LMC midwives, in line with requirements of the Referral Guidelines (MoH, 2012), NZCOM's philosophy (NZCOM, 2015), and the midwifery partnership model of care (Guilliland & Pairman, 2010).

A related New Zealand study evaluated experiences of 174 women requiring transfer of care to secondary services in Christchurch, New Zealand (Grigg et al., 2015). A postal survey was sent to women at six weeks post-partum, collecting quantitative and qualitative data. These women reported generally positive experiences despite a changed birthing plan and valued continued involvement of their known LMC midwife in their care after transfer to secondary services. In a minority of instances where unsatisfactory experiences occurred, poor communication by LMC midwives, obstetricians and other health professionals was a significant factor. These results emphasised the need to include women in decisions about

their care. There was no direct information on interactions between obstetricians and midwives, but this study suggested that collaboration between LMCs and obstetricians was usually satisfactory from women's viewpoint.

2.3.3 Collaboration at a governance level in New Zealand

Standard 6 of NZCOM's Standards of Midwifery Practice requires that midwives work collaboratively with other health professionals and refer when at the limit of midwifery expertise (NZCOM, 2015). The Royal Australasian College of Obstetricians and Gynaecologists (RANZCOG) (RANZCOG, 2018) also discusses the importance of collaboration with other professionals on their website. This suggests commitment to the principle of collaboration from both professions. Examples of collaboration between New Zealand midwives and obstetricians are found on NZCOM's website (NZCOM, 2016). There are ten published multidisciplinary guidelines including the Referral Guidelines, all produced through joint efforts of NZCOM, RANZCOG, and allied medical groups. This indicates that collaboration between midwives and obstetricians can and does happen effectively at professional and governance levels in New Zealand.

2.3.4 Positive collaborative experiences internationally

Internationally, situations where collaboration between midwives and obstetricians worked well were identified in the literature. An Australian study (Beasley et al., 2012) reported on effectiveness of a newly instituted collaborative model of maternity care, termed Midwifery Group Practice care. This model of care could occur following passing of the Nurses and Midwives Bill 2009, ostensibly allowing greater autonomy for midwives in caring for low risk women but also requiring a greater degree of interprofessional collaboration by midwives than previously. Formerly maternity care had followed a medical-led model. The collaborative practices of midwives and obstetricians were examined through retrospective analysis of notes from weekly case review meetings over a 12-month period. Beasley et al. (2012) evaluated consistency of care against Australian National Midwifery Guidelines for consultation and referral (Australian College of Midwifery, 2013). Findings were of consistent care practices, equal contribution to discussions by midwives and obstetricians and opportunities to attend shared education. Both midwives and obstetricians reported high levels of satisfaction with this care model.

A postal survey of collaborative practices between primary and secondary maternity care in the Netherlands canvassed 74 obstetricians, 43 hospital-based midwives, 154 obstetric nurses and 109 primary care midwives. The finding echoed those of Skinner and Foureur (2010), with usually high ratings of collaborative practice, although obstetricians rated their

collaboration with midwives and nurses more highly than midwives and nurses rated their collaboration with obstetricians (Romijn et al., 2018).

Four case reports described local instances in the U.S. where a model of care encouraging collaboration worked successfully, along with the authors' perspectives on what promoted collaboration. One case report described improved maternal health for predominantly rurally based indigenous women where midwife-led care was the norm (Ogburn et al., 2012). Three other case reports of collaborative practices established within U.S. hospital based maternity practice settings discussed positive outcomes from a collaborative model of care (Chang-Pecci et al., 2012; Perdion et al., 2013; Stevens et al., 2012). These international studies together with the New Zealand studies (Skinner, 2011; Skinner & Foureur, 2010) were evaluated to identify factors promoting collaboration between midwives and obstetricians and factors leading to unsatisfactory relationships.

2.4 Factors promoting successful collaboration

Factors promoting effective communication included flat hierarchies and midwifery autonomy, clear role definitions and boundaries, structured communication tools, trust and respect, regular interprofessional interaction, robust conflict resolution processes, shared education and effective communication systems (Beasley et al., 2012; Chang-Pecci et al., 2012; Ogburn et al., 2012; Perdion et al., 2013; Romijn et al., 2018; Skinner, 2011; Skinner & Foureur, 2010; Stevens et al., 2012).

2.4.1 Flat hierarchies and midwifery autonomy

For collaboration to be meaningful, both parties needed equal input and woman needed involvement in decisions relating to their care. Midwifery autonomy was described as an important factor promoting successful interprofessional collaboration (Beasley et al., 2012; Downe et al., 2010; Hartz, Foureur, & Tracy, 2012). New Zealand's midwifery-led maternity system fulfils this criterion (Grigg & Tracy, 2013). The finding that the relationship between New Zealand midwives and obstetricians was usually positive suggested that autonomy may have promoted strong collaboration (Skinner & Foureur, 2010). A U.S. study comparing states where legislation supported autonomous midwifery practice with those that did not, reported marginally better birth outcomes with slightly lower caesarean section rates, reduced preterm birth and fewer low birthweight babies in states with autonomous midwifery practice (Yang, Attanasio, & Kozhimannil, 2016). This supported the safety and efficacy of an autonomous midwifery workforce.

2.4.2 Role definition

Clear roles for midwives and obstetricians strengthen collaboration (Munro, Kornelsen, & Grzybowski, 2013). In New Zealand, the Referral Guidelines contribute to delineation of role boundaries (MoH, 2012). A study on interactions between LMC midwives and core midwives suggested some lack of role clarity at the primary secondary interface in New Zealand (Norris, 2017). Norris found that the Referral Guidelines were useful in primary secondary interface negotiations, but boundaries sometimes remained blurred for these midwives. This suggested a need to identify, understand, and remediate circumstances where blurred boundaries occurred.

2.4.3 Structured communication tools

The structured communication tool SBAR (Situation, Background, Assessment, Recommendation) was first developed by Ottewill, Urben, & Elson (2007). The variant ISBAR 2009 (Identify, Situation, Background, Assessment, Recommendation) was adopted by Marshall, Harrison, and Flanagan (2009). Marshall et al. (2009) found that reining in use of ISBAR was shown to improve content and clarity of communication when medical students phoned senior colleagues (Marshall et al., 2009). Use of a further variant, SBARR (Situation Background, Assessment, Recommendation, Response) in maternity care is reported on in New Zealand (Norris, 2017), and in the Netherlands (Romijn et al., 2018). Both these studies found that SBARR was regarded by participants as a useful tool. In an international review article on maternity care handover practices, Spranzi (2014) reported frequent policy to use variants of this tool but inconsistent uptake by staff, finding that staff overestimated self-evaluation of their handover effectiveness and use of the communication tool.

2.4.4 Fostering trust and respect

Respectful relations and trust were identified as critical factors for effective collaboration. When participants knew each other, respect, and trust were fostered. (Chang-Pecci et al., 2012; Downe et al., 2010; Lane, 2012). Opportunities to get to know each other outside of the clinical context were through regular interprofessional meetings, shared education, and shared social events (Ratti et al., 2014). Two international studies where medical and midwifery students were taught together, found increased understanding of respective roles (Meffe, Moravac, & Espin, 2012; Murray-Davis, Marshall, & Gordon, 2014). Participants reported positive attitudes to collaboration and interprofessional relationship building, communication improved, and woman-friendly care was promoted.

2.4.5 Regular interprofessional meetings

Regular workplace meetings between obstetricians and midwives where both have equal voice strengthened collaborative efforts (Beasley et al., 2012; Chang-Pecci et al., 2012; Hartz et al., 2012; Stevens et al., 2012). A case study of a U.S. maternity hospital described a model for transforming dysfunctional interprofessional relationships into collaborative practice. (Chang-Pecci et al., 2012). Changes, including institution of regular interdisciplinary meetings, robust processes for conflict resolution, encouraging flat hierarchies, and shared education for midwifery and medical students, were instituted by a multidisciplinary working group of obstetricians, midwives and other stakeholders. Before the change, obstetricians, midwives and family physicians worked within the centre in isolation from each other. Poor interdisciplinary communication, mistrust, lack of interprofessional respect and conflict over management were reported. With the changed model of care, willingness to collaborate, frequency of interprofessional communication and respect for each other as professionals improved.

2.5 Barriers to effective collaboration

Predominantly unsatisfactory relationships between obstetricians and midwives were described in several of the studies on interprofessional relationships between midwives and obstetricians (Behruzi et al., 2017; Downe et al., 2010; Lane, 2012; Ratti et al., 2014; Reiger, 2011; Shaw et.al., 2013). Factors leading to unsatisfactory relationships were historical animosity, doctors' mistrust of midwifery education, power imbalance and differing philosophies. Poor systems and information transfer processes undermined interprofessional collaboration (Psaila, Schmied, Fowler, & Krusk, 2015; Schmied et al., 2015; Shaw et al., 2013). Factors leading to unsatisfactory relationships are discussed in this section.

In the Netherlands, Warmelink et al. (2017) surveyed primary care midwives and found almost 45% of 99 primary care midwives reported positive relationships with obstetricians, significantly lower than the 72% reported by New Zealand LMC midwives (Skinner & Foureur, 2010). In Canada, Ratti et al. (2014) surveyed 25 primary care midwives, 37 obstetricians and 56 family physicians (the equivalent of New Zealand GPs), finding that 97% of obstetricians and 100% of primary care midwives opined that relationships between the two professions could improve. The greater incidence of reported positive interactions in New Zealand may reflect different practice but could also represent differences in the questions answered by participants. Both the Dutch and New Zealand systems have a model of care where midwifery autonomy in primary maternity care has been the norm for long periods, Dutch midwives having always had the right to practise autonomously (Amelink-

Verburg & Buitendijk, 2010). In contrast, midwifery autonomy was only legislated in Canada in 1998 with fully funded midwifery care instituted in 2009. Only 2-5 % of women accessed midwifery-led care in Canada when Ratti et al.'s (2014) study took place. It can be hypothesised that passage of time may have led to greater understanding of each profession by the other in New Zealand and the Netherlands, with more opportunity to develop collaborative systems and processes. This is borne out by participants' perceptions that their interprofessional relationships were improving in Canada. Relationships between LMC midwives and obstetricians in New Zealand appeared relatively healthy. A contrasting view is that 28% of LMCs did not report positive interactions (Skinner & Foureur, 2010). Hence there remains a need to find ways to improve interprofessional relationships.

2.5.1 Power imbalance

Medical dominance could lead to impaired communication between midwives and obstetricians (Fealy et al., 2016; Lane, 2012; Ratti et al., 2014; Reiger & Lane, 2009; Watson et al., 2016). This sometimes resulted in midwives feeling disempowered and shut out of important communications and decisions. Finding in the Netherlands that obstetricians rated their collaboration with midwives significantly higher than midwives rated collaboration with obstetricians could be explained by hierarchies favouring medical dominance (Romijn et al., 2018).

In some countries, legislation ensured dominance of medical discourse (Gorman, 2016; Lane, 2012; Yang et al., 2016). In New Zealand this was the case between 1971 and 1990, when midwives were legally required to work under a doctor's supervision (Donley, 1998). In Australia, several midwife-led units have been established with reported success (Lane, 2012). However, Lane reported that midwives are legally obliged to seek endorsement from and work under supervision of obstetricians, with no similar obligation for obstetricians to collaborate with midwives. Lane posits that collaboration is best facilitated by equality and trust, but that in many instances in Australia, legal constraints facilitate a hierarchical maternity system.

At worst, in the U.K. and Australia, power imbalance was identified as a significant factor allowing individual obstetricians to continue practising despite widespread concerns about their practice, and contributing to high neonatal mortality rates, maternal mortality and morbidity (Reiger, 2011). Reiger (2011) described formal investigation of some maternity units and individual obstetricians with aberrant outcomes.

Medical dominance led to a tendency for medical philosophy to prevail, regardless of evidence or the woman's wishes (Downe et al., 2010). In a review article on human rights in health care, Lokugamage and Pathberiya (2017) reported a tendency for doctors to believe their practice was evidence-based. This tendency persisted despite many instances where practice occurred where evidence was lacking, or the intervention had been shown to cause harm. For example, routine intrapartum cardiotocograph (CTG) in low risk women has been shown to increase operative deliveries without improving fetal outcomes, therefore increasing maternal morbidity yet is still used routinely by some practitioners (Bick, McCourt, & Beake, 2004).

Word choice may unconsciously promote power imbalance. Silverton (2017) discussed the power of words in maternity care, with midwives' language tending to be more equalising, while doctors' language tends to maintain medical dominance:

> When I began as a midwife many years ago, we cared for 'patients', despite all the connotations of passivity and compliance that that word encompasses. Now, almost universally, midwives speak of 'women' and 'mothers'. Our medical colleagues have not always followed suit (p. 618).

This finding was echoed by Matthias (2010), who conducted in depth interviews with two midwives and two obstetricians and recorded serial consultations by these practitioners. Matthias observed that while both midwives and obstetricians discussed promoting women's choices, midwives used more facilitative language in their consultations and were more comfortable with women making choices outside of their recommendation.

Midwives were not immune to using language said to promote power imbalance. An English study found commonplace description of women requiring lactation support as "girls" or "ladies", which was interpreted as patronising and promoting power imbalance (Furber & Thomson, 2010).

2.5.2 Differing philosophies

Midwives and obstetricians have been described as having differing philosophies. Midwives tended to view birth as a normal process, occasionally requiring intervention, and focused on providing information to empower women's decision making (Guilliland & Pairman, 2010; NZCOM, 2015). Obstetricians were described as more risk averse, tending to normalise medical intervention in low risk births (Downe et al., 2010; Matthias, 2010; Ratti et al., 2014; Watson et al., 2016). Downe et al. (2010) reported that both professions described a common goal of healthy mother and baby but had differing ideas on the best

pathway to this objective. Philosophical difference could lead to tensions between the two professions, posing a barrier to collaboration (Behruzi et al., 2017; Blaaka & Eri, 2008; Matthias, 2010; Munro et al., 2013; Ratti et al., 2014; Warmelink et al., 2017).

A societal culture of belief in superiority of obstetric maternity care together with a dominant medical profession leads to promotion of medical philosophy over midwifery philosophy (Watson et al., 2016). In 1988 the culture supporting medical dominance in New Zealand was challenged by the Cartwright inquiry (Cartwright, 1988). Cartwright (1988) found that a gynaecologist conducted a clinical trial without consent, withholding currently recommended treatment for cervical carcinoma in situ, and that obstetric colleagues failed to prevent or report this. The Cartwright inquiry shook trust in medical practice and led to far reaching recommendations of change to processes of consent to treatment, participation in clinical trials, medical education, advocacy for health care consumers, and legislative change including passing of the HPCAA 2003 to ensure protection for all health care consumers.

Despite the Cartwright inquiry and other instances of unethical or dangerous clinical practice by doctors, belief in superiority of medical practice over other disciplines can persist, even amongst midwives. A U.K study had 18 midwife participants read and evaluate two maternity care research articles (Hicks, 1992). Half the participants were told that the first paper was written by an obstetrician and the second by a midwife. The other half were told that the first was written by a midwife and the second by an obstetrician. Participants consistently reported that the authors grasp of research methodology, understanding of statistical analysis and contribution to current practice was greater when they believed the author was an obstetrician, suggesting that midwives may give greater credence to medical research than midwifery research (Hicks, 1992).

2.5.3 Fear of litigation

Fear of litigation is increasingly commonplace and was described as a driver promoting medical dominance amongst both professions in two studies from the U.K. and one from the U.S. (Bick et al., 2004; Hindley & Thomson, 2007; Matthias, 2010). For example, some midwives in the U.K. reported using routine CTG for all labouring women to provide medicolegal defence, despite evidence that routine CTG use in low risk situations results in poorer maternal outcomes at a population level without improving neonatal outcomes (Bick et al., 2004). Thus, defensive practice does not necessarily represent safest practice or the woman's best interests.

2.5.4 Philosophical difference in New Zealand

NZCOM defines ethics, values and norms for New Zealand midwives (NZCOM, 2015). The philosophy of the New Zealand model of midwifery care is presented in the Midwives handbook for practice (NZCOM, 2015). There is a strong woman centred focus, "Midwifery care takes place in partnership with women… Midwifery care is given in a manner that is flexible, creative, empowering and supporting" (NZCOM, 2015, p. 3). While woman centred care is pivotal, the importance of collaboration with other practitioners, as well as research, experience and knowledge are also referred to in the NZCOM philosophy statement. Woman centred care aligns with the midwifery partnership model (Guilliland & Pairman, 2010), where midwives perceive that women should have equal input in defining 'excellent care', which is fluid, existing in a physical, emotional, social and spiritual context. This promotes a norm where midwives provide information to assist women in making choices, advocating for collaboration with other health professionals as need arises (NZCOM, 2015).

The New Zealand midwifery profession identifies as feminist (Anderson & Pelvin, 2006). Beasley (1999) defined feminism as the aim for equal social, political, economic and personal rights for women. Achterberg (1990) provided a feminist perspective on the development of maternity care. Cartesian philosophy separated notions of caring and curing. Doctors, mostly male, took ownership of 'curing' claiming a scientific approach. Traditional healers, predominantly women, were left with caring, regarded as a second-order need, directed by male physicians. While science is also important in modern midwifery, caring remains a priority, with adherence to a usually less medicalised birthing model (NZCOM, 2015).

The RANZCOG website describes obstetric philosophy, with this vision statement: "Excellence in women's health- to be the leading authority in women's health in Australia and New Zealand" and this mission statement: "Through education and training, advocacy, and policy development we influence the standard of care delivered to our community" (RANZCOG, 2018). These statements demonstrate the obstetric profession's commitment to delivering quality care, but quality is defined by the profession, aligning with the medical model of care. This medically centric focus risks losing woman centred care and equates with Descartian dualism which formed the historic basis of modern medicine, separating the physical from the mind (Achterberg, 1990). An underlying principle of Descartian dualism is that analytical reasoning will lead to truth. While the importance of collaboration is discussed on the RANZCOG website, these statements suggest an assumption at a governance level that the balance of power rests with the doctor. In the literature, two authors

of qualitative studies observed that obstetricians discussed giving choice to women but used language more consistent with directing women's choice (Matthias, 2010; Ratti et al., 2014).

The medical model is not universally accepted by the medical profession. Abumadini (2008) described a now widely accepted bio-psycho-social model of health, recognising that mind, body and social context are inextricably woven together, all impacting on health. However, these RANZCOG statements suggest persistence of the medical model of care in obstetrics at a governance level in Australasia.

The philosophy statement of NZCOM and the RANZCOG vision and mission statements demonstrate contrasting philosophies. NZCOM places greatest emphasis on women centred care, minimising power differentials between practitioner and woman. RANZCOG statements imply a focus on delivery of health care with a more practitioner centred, authoritative tone. While both professions define the safety of mothers and babies as pivotal, differing philosophies lead to difference in opinion as to the best pathway to optimal outcomes, a potential barrier to communication.

2.5.5 Poor information transfer, support systems and processes.

Poor information transfer systems contributed to poor communication despite good intentions of individual practitioners (Madden2011; Psaila, Schmied, Fowler, & Kruske, 2015; Schmied et al., 2015; Shaw et al., 2013). Shaw et al. (2013) analysed a Northern Irish maternity service where antenatal care was delivered in the community via shared care between GPs and community midwives. Findings were of poor collaborative practices, with insufficient process for interprofessional communication, infrequent meetings to discuss complex cases, exclusion of midwives when such meetings did occur, poor knowledge amongst GPs of policy and protocol, lack of information sharing, and inadequate support services for community midwives.

Poor systems and processes contributed significantly in several investigations into maternity facilities in the UK and Australia with higher than expected maternal mortality and morbidity and neonatal mortality (Reiger, 2011). These investigations identified a governance responsibility to address systemic inadequacies to ensure interprofessional communication is optimised to maximise safety for mothers and babies.

2.5.6 Collaboration between midwives and obstetricians: Summary

To summarize, the literature identified that collaboration between midwives and obstetricians was promoted by flat hierarchies, equality for midwives, using structured communication tools such as SBAR, having robust conflict resolution processes, when there

is trust and respect between the professions, and when individual professionals knew each other. Barriers to collaboration may be differing philosophies and power imbalance favouring obstetricians. Language choices may increase or reduce power imbalance. Poor information transfer systems may undermine collaboration and reduce safety for mothers and babies. The current study evaluated factors promoting positive interactions between participant midwives and obstetricians and any barriers to effective collaboration with a view towards defining pathways to more effective collaboration.

2.6 Guidelines for consultation with obstetric and related medical services (Referral Guidelines)

Clinical guidelines are used in many healthcare areas in New Zealand and internationally to standardise care (Behruzi et al., 2017; Healy & Gillen, 2017; National Health and Medical Research Council, 2010; Skinner & Foureur, 2010). The Guidelines for consultation with obstetric and related medical services (Referral Guidelines) used in New Zealand (MoH, 2012) are discussed because of their significant influence on primary secondary interface interactions between LMC midwives and obstetricians, and because their use and interpretation by participants was a focus of the current research.

2.6.1 Overview of the Referral Guidelines

The Referral Guidelines provide a list of conditions where referral or transfer of care to secondary maternity care services is recommended. They are intended to improve safety of maternity care, provide nationally consistent consultation standards, support/improve transfer of clinical responsibility and emergency care, and give confidence to women, their whanau and health professionals that consistent, appropriate care will occur. A stated aim is to keep the woman, baby and whanau (family) at the centre of care. The Referral Guidelines were first published in 1996 and have been most recently updated in 2012 (MoH, 2012). They were appended to the Section 88 Maternity Services Notice 2002 prior to being taken out of the Section 88 document when the Primary Maternity Services Notice 2007 was produced (MoH, 2012). Removal of the Referral Guidelines from Section 88 obviated the need for legislative change to upgrade them. As best practice is a constantly evolving concept, it appears logical to allow flexible interpretation and use of the Referral Guidelines rather than having a legal requirement to follow them. However, midwives have been criticised by the HDC for failure to follow the Referral Guidelines (HDC, 2019a, 2019b). This demonstrates that the Referral Guidelines are regarded by those with investigative power as underlying best practice principles, representing a standard by which midwives' practice may be judged.

2.6.2 Relevant New Zealand research

Three studies, discussed in Sections 2.2.2 and 2.3.1, gave insight into New Zealand LMC midwives' use of the Referral Guidelines (Norris, 2017; Skinner, 2011; Skinner & Foureur, 2010). LMC midwives regarded the Referral Guidelines as a useful tool (Norris, 2017; Skinner, 2011). Consistent referral patterns were found across all midwife levels of experience, ages and regardless of prior nursing or direct entry midwifery education, or New Zealand or overseas midwifery education programmes undertaken (Skinner & Foureur, 2010). Skinner and Foureur (2010) observed that this finding of consistent referral patterns contrasted with widely varying referral practices reported amongst GPs. The finding of these three studies provided evidence that LMC midwives usually used the Referral Guidelines as intended.

2.6.3 Terms and requirements of the Referral Guidelines

The Referral Guidelines define referral categories as primary, consultation, transfer, and emergency. Primary referrals are to other primary care practitioners, such as GPs or physiotherapists. Consultation, transfer and emergency care referrals are to secondary care services.

The Referral Guidelines focus strongly on the importance of communication at the primary secondary interface, epitomised by the requirement for three-way conversations whenever there is consultation with secondary services or a transfer of clinical responsibility. "Transfer of clinical responsibility is a negotiated three-way process involving the woman, her LMC and the practitioner to whom clinical responsibility is being transferred" (MoH, 2012, p. 2). The crucial role of communication from LMC to obstetrician and from obstetrician to LMC is stipulated. "Transfer of clinical responsibility requires timely and full communication from the LMC to the specialist; and then from the specialist back to the LMC…" (MoH, 2012, p. 12). The Referral Guidelines promote collaboration between midwives, doctors and women, and provide direction on expected process when transfer of clinical responsibility occurs.

2.6.4 When women decline care

Under the Health and Disability Commissioner Act 1996, every woman has the right to informed consent, including the right to refuse or withdraw consent for services (Health and Disability Commission, 1996). The right to refuse services and treatment is recognised in the Referral Guidelines, with a process map for action if the woman declines care (MoH, 2012). The Referral Guidelines specify that LMCs may follow this process map to decline

further involvement in care, but must assist the woman to find alternative care, and cannot decline to provide emergency care to women under their care.

2.6.5 Production of the Referral Guidelines

The Referral Guidelines were compiled by an expert working group (MoH, 2012). The 2012 expert working group comprised six midwives from varying backgrounds including LMCs, core midwives, education, research, administration and governance. Other working group members included four doctors; an obstetrician, an anaesthetist, a paediatrician and a general practitioner, and two consumer representatives. The inclusion of the three major stakeholders in maternity care (women, midwives and doctors) and the requirement for woman centred care might be expected to promote ownership of the Referral Guidelines for all involved. However, the extent to which this is recognised by stakeholders is unknown, suggesting a need for further research into use and understanding of the Referral Guidelines. The current study examined perspectives of LMC midwives and obstetricians on use of the Referral Guidelines but did not examine women's perspectives.

The Referral Guidelines are stated to be based on best practice guidelines and informed by available evidence, expert opinion and current New Zealand circumstances (MoH, 2012). No reference list is included. An email from the MoH confirmed there is no such reference list (K. Samure, personal communication, July 29, 2019). This makes it unclear to what extent expert opinion or robust evidence is used in their production. There may be instances where research evidence guiding practice was lacking, making it necessary to recourse to expert opinion to produce some guidelines. For example, Bricker (2014) describes a paucity of academic evidence available to inform practice relating to twin and triplet births. This leaves potential to question their applicability in some instances.

2.6.6 Ideal referral guidelines

Allen (2014) described ideals for developing trustworthy referral guidelines, including consultation with all interested parties in working groups, literature review using systematic review and meta-analysis, description of the quality of evidence informing recommendations, clear statements of the recommendations, and provision of a published plan for updating. Most guidelines, probably including the New Zealand Referral Guidelines, do not meet all these ideals, being informed predominantly by expert opinion and consensus (Alonso-Coello et al., 2010; Lokugamage & Pathberiya, 2017).

2.6.7 Limitations to referral guidelines

Limitations to referral guidelines in health care have been described. Limitations include limitations of experts' understanding of how to critique evidence, restriction of practitioner decision making options, and low uptake, particularly when practitioners had no meaningful input into their development or did not believe the guidelines were applicable to local circumstances (Alonso-Coello et al., 2010; Graham et al., 2015; Lokugamage & Pathberiya, 2017; Lowe, 2010). All guidelines are limited by the extent to which they are based on robust clinical evidence. Blunt (2016) described use of hierarchies of evidence by proponents of evidence-based medicine. These hierarchies describe relative reliability of different evidence. Systematic reviews, such as those published in the Cochrane database top the hierarchy. Following in order of decreasing reliability are critically appraised topics, critically appraised individual articles, randomised clinical trials, cohort studies, case-controlled studies, case series and expert opinion. As most guidelines are produced by expert working groups and a minority are based on high level evidence, those based on expert opinion remain open to challenge because they use evidence that has lowest reliability. This is relevant to New Zealand maternity care and should be acknowledged when discussing decisions with women relating to their care as the Referral Guidelines used in New Zealand may fall within this group because they are not referenced.

2.6.8 Revision of the Referral Guidelines

In New Zealand maternity care the Referral Guidelines state that they should be revised every five years, with a review date set for December 2016 (MoH, 2012), aligning with the ideal requirement of a written plan for guideline updates (Allen, 2014). At the time of writing up this thesis (October 2019), the Referral Guidelines remain overdue for revision. A contributing factor to delay may have been the ongoing pay equity dispute for LMC midwives, between the MoH and NZCOM. Legal action was filed in 2016 (NZCOM, 2019), and stalled when an agreement in principle was reached on a model of care and funding for this model. The government then breached the agreement to fund the proposed model of care. Instead, the 2018 budget included an 8.9% pay increase which appeared generous but fell considerably short of the funding model agreed to. Negotiations are ongoing (MoH, 2019), and may result in further legal action (NZCOM, 2019). As the MoH convenes the Referral Guidelines expert working group and NZCOM is a major participant, these ongoing complex negotiations may have led to side-lining of revision of the Referral Guidelines.

2.6.9 The Referral Guidelines: Summary

The Referral Guidelines meet the recommendation for consensus of interested parties, as they involve consumers, midwives, obstetricians and allied medical specialists. The Referral Guidelines have limitations because the extent to which they are based on robust evidence cannot be evaluated. Despite these limitations, the Referral Guidelines have an important role in defining the primary secondary interface. While there is no legal obligation to follow the Referral Guidelines, there are expectations from NZCOM, RANZCOG and the HDC that LMCs will follow them to ensure consistent referral practices. Evidence suggests that consistent referral practices by LMC midwives does occur, which may be due to consistent use of the Referral Guidelines. One aim of the current study is to increase the body of knowledge of use and understanding of the Referral Guidelines by participants.

2.7 Handover of care

When a decision to transfer clinical responsibility from primary to secondary maternity services is negotiated with the woman, handover of clinical responsibility is an important component of safe midwifery care. A systematic review of 13 articles on handover of care in maternity hospital settings by Spranzi (2014) gave a definition of handover of care: "handover is the transfer of information, professional responsibility and accountability for some or all aspects of care for a patient, or a group of patients, to another person or professional group on a temporary or permanent basis" (p. 739). The importance of effective handover was underlined as Spranzi (2014) cited poor communication as a recurring theme when adverse events occurred. Spranzi (2014) found a dearth of literature on handover of care.

An Irish qualitative study of midwives, obstetricians and other maternity care workers found that effective handover of care required adequate time, a private appropriate venue, lack of interruption and equal valuing of team members (Fealy et al., 2016). Power imbalance stemming from hierarchies both within and across professions sometimes inhibited those lower in the hierarchical order from raising important issues. Fealy et al. (2016) noted that the more people involved in a handover the more potential there was for information loss and adverse events to occur.

Effective processes for handover of care were identified as particularly important in emergencies. Two large studies from the U.S. and Northern Ireland found that role confusion with failure to identify a leader was common and that that juniors tended to defer to seniors in maternity emergencies (Guise et al., 2011; Madden et al., 2011). Teamwork, with an

identified leader, improved outcomes and there was a responsibility for practitioners to communicate with each other and clearly nominate a leader. Interdisciplinary scenario-based training improved teamwork and performance in emergencies (Lutgendorf et al., 2017).

Two New Zealand studies gave perspective on New Zealand maternity handover practices handover of care (Fergusson et al., 2010; Norris, 2017). Norris (2017) evaluated handover practices between LMC and core midwives in delivery suites, interviewing three core and four LMC midwives in a qualitative study. Norris reported that several DHBs have a policy that LMCs contact an ACMM/delivery suite coordinator midwife rather than a doctor when women were admitted to maternity units. The ACMM's role was accepting admissions, negotiating responsibilities of primary and secondary care, managing the secondary care midwifery workforce and liaising with obstetricians. Norris found that midwives valued availability of the ACMM as central contact person to accept calls.

Fergusson et al. (2010) studied the experiences of five delivery suite coordinators in New Zealand, describing the role using the terms 'hub' and 'pivot'. Fergusson et al. (2010) described these coordinators as having a helicopter view of the maternity unit and discussed complexity of management of an unpredictable workload with frequently inadequate staffing. ACMMs commonly acted as intermediaries between LMC midwives and the obstetric team. This study gave perspective on positioning of ACMMs in this intermediary role. A search of the literature found no literature describing or delineating the effect of intermediaries in communication on interprofessional relationships between LMC midwives and obstetricians. This identified that such communication chains involving handover of clinical information and responsibility required further evaluation to understand their impact on collaboration between midwives and obstetricians.

2.8 Summary of literature review

The research question was "How do midwives and obstetricians communicate at the primary and secondary interface?" The literature review gave perspective on both current knowledge and gaps in knowledge relating to the interprofessional interactions of LMC midwives and obstetricians.

There was evidence of both unsatisfactory interprofessional relationships and positive collaboration in differing settings between midwives and obstetricians internationally. In New Zealand, studies on collaboration between obstetricians and midwives, and the existence of guidelines and consensus statements produced in collaboration between the two professions gave a picture of relatively healthy collaborative practices.

Collaborative care was promoted by flat hierarchies and midwifery autonomy, clear role definition and boundaries, robust conflict resolution processes, structured communication tools, trust and respect, regular interprofessional interaction and effective communication systems. Potential barriers to collaborative practice were medical dominance, differing philosophies, mistrust in midwifery education, perceived business competition, poor information transfer process and isolation of different professionals from each other. A need for further evaluation of what constitutes effective collaboration in New Zealand and how to foster this was identified.

The literature suggested that New Zealand LMC midwives regarded the Referral Guidelines as an important tool for practice use. A limitation to the Referral Guidelines is the absence of a reference list. This means that the extent to which they are based on robust evidence cannot be evaluated. The literature identified consistent referral practices amongst New Zealand midwives. The literature did not provide detail of how the Referral Guidelines were used in New Zealand.

The current study aimed to explore the professional interface between LMC midwives, who provide most primary maternity care in New Zealand, and obstetricians who provide predominantly secondary or tertiary care, to evaluate what is working effectively, whether there are barriers to communication, and to identify means of promoting effective collaboration at the primary secondary interface. The second aim was to increase knowledge regarding participant use and understanding of the Referral Guidelines. It was identified that there was limited literature on handover of care, and no literature was found on intermediaries in communication chains.

Chapter 3. Research methodology and design

The purpose of this research was to identify how midwives and obstetricians communicated at the primary secondary interface in New Zealand. The research aims were to identify what aspects of communication worked well for LMC midwives and obstetricians at the primary secondary interface, how to promote effective collaboration between these two professions, and to describing participants' understanding and use of the Referral Guidelines. This chapter outlines why Appreciative Inquiry (AI) was the chosen theoretical perspective in this study. A description of the development of AI as a theoretical perspective, analysis of its applicability to the current study, and potential limitations is given. Why thematic analysis was chosen as the research methodology is explained. How the research was undertaken is detailed. Researcher positioning and potential biases are addressed, and relevance and limitations of the current study are covered.

3.1 Methodology: Philosophical underpinnings

3.1.1 Process of choosing a theoretical approach

I wished to explore the communication practices between midwives and obstetricians at the primary secondary interface. The research aimed to explore how communication occurred between LMC midwives and obstetricians at the primary secondary interface, to propose pathways to optimise interprofessional communication, and to explore participants' understanding and use of the Referral Guidelines. Therefore, asking qualitative questions using 'why' and 'how' rather than the more quantitative questions of 'which' 'where' and 'what' made qualitative methodology the logical choice for this research.

When choosing a theoretical perspective, I considered the fact that overseas literature suggested tensions sometimes existed between midwives and obstetricians (Downe et al., 2010; Lane, 2012; Ratti et al., 2014; Reiger, 2011; Shaw et al., 2013). New Zealand literature suggested relatively positive interprofessional relationships between midwives and obstetricians when compared to some overseas settings (Skinner & Foureur, 2010). Nonetheless, it was recognised that if questioning focused solely on negative aspects of the interprofessional relationship, this could create or exacerbate tensions between the two professions. This would be counter to the aim of a study looking to find ways of optimising interprofessional communication between midwives and obstetricians. This concern led to consideration of AI as a theoretical approach.

3.1.2 Appreciative Inquiry background

Appreciative Inquiry comes from a perspective that there are positive components in all work situations. AI was first proposed as a theoretical perspective in the 1980s and initially applied to business (Cooperrider & Srivastva, 1987). More recently, AI has been adopted in qualitative health care studies (Smythe, Payne, Wilson, & Wynyard, 2009). Development of AI occurred because of concern that most research was driven from a critical perspective by a need to find and solve problems. Ludema, Cooperrider, and Barrett (2001) argued that a critical approach to qualitative research had potential to result in exacerbation of tensions within participant communities. This potential consequence gave shape to my misgivings about potential harm that could result from the current study. This suggested the need for an actively positive theoretical approach, which appeared to be best met by AI.

The framework of AI encourages description of currently positive experiences, visualisation of ideal circumstances, and development of proposals to achieve this ideal, and the relationship between researcher and participant is said to be a collaborative process leading to positive change (Cooperrider & Srivastva, 1987). The positive framework was deemed likely to encourage recruitment through reassurance that my agenda was positive. AI was likely to facilitate discovery of what components of communication between midwives and obstetricians were currently working well and how to build on these (Smythe et al., 2009). Sandars and Murdoch-Eaton (2017) described use of AI in research on medical education, reporting that it promoted egalitarianism, acknowledged differences in social reality, and was inclusive and collaborative. These features of AI aligned with the aims of the current study and with the requirement for equality to promote successful interprofessional collaboration (Downe et al., 2010). Therefore, AI was chosen as the theoretical perspective informing this study, with the aim of facilitating participant recruitment, creating a safe interview environment and encouraging constructive suggestions for improvement to be generated by participants.

3.1.3 Appreciative Inquiry in midwifery research

Midwifery researchers have used AI as a theoretical approach in research in New Zealand (Bilous, 2018; Norris, 2017; Smythe et al., 2009) and internationally (Maxwell, Black, & Baillie, 2015; Sidebotham, Fenwick, Rath, & Gamble, 2015). Four of these studies reported a positive impact of appreciative inquiry in facilitating research interviews. However, one study, which aimed to assess Australian midwives' perceptions of their role in a changing maternity workplace, reported a demoralised midwifery workforce, with participants struggling to supply suggestions for positive change (Sidebotham et al., 2015). Sidebotham

et al. (2015) identified a potential pitfall of AI if participants were unable to find positives in their current work situation or had no proposals to improve their situation. In New Zealand, positive relationships between midwives and obstetricians had been documented (Skinner & Foureur, 2010) so it was anticipated that positive components to interprofessional communication existed and that an approach using AI focus would elicit positive experiences and suggestions for improvement.

3.1.4 Appreciative Inquiry and critical data

One critique of AI suggested that it deliberately overlooked problems (Liebling, Price, & Elliott, 1999). Other authors disagree, seeing this as a simplistic view of AI (Bushe, 2011; Carter, 2006; Clouder & King, 2015; Johnson, 2013). Proposals for positive solutions can only occur if barriers are first identified (Bushe, 2011). Clouder and King (2015), who used AI to study experiences of students with disabilities, stated, "Inevitably negative comments still emerged, and the aim is to not ignore the problems but to turn them into ideas for improvement, generated with the people who can provide realistic and authentic insights." (p. 182). Johnson, an experienced AI researcher, specifically discussed the emergence of difficult emotions and critical perspectives and how she perceived these in her research. Her view is that ignoring such emotions and perspectives is neither affirmative nor appreciative and uses the term 'shadow material' to describe them. Johnson (2013) further states "By ignoring what is difficult or challenging, we might lose important insights about key potentials for the organization" (p. 203). Johnson considered that 'shadow material' should be embraced and used to generate positive change.

An Australian research paper exploring the role of midwives in maternity service reform using AI as a theoretical perspective openly explored negative material and yet remained solution focused (Sidebotham et al., 2015). This balance between positive and critical findings was described by Carter (2006):

> Entering the research field appreciatively sends positive signals to everyone that the research touches. It does not act as a magic shield preventing stories where 'things went badly/disastrously/terribly' being told. Indeed 'stories of the worst' are told but they are told alongside 'stories of the best. (p. 60)

These researchers have all chosen to present negative data in a solution-based manner within the framework of appreciative inquiry.

Bushe (2011) asserts that there are many different ways of using AI:

> David Cooperrider, the creator of appreciative inquiry, resisted writing a book on how to do AI until the turn of the millennium because he wanted people to focus on the philosophy behind this approach and not see it as a technique. As a result, many different ways of doing AI have proliferated and it is inaccurate to say AI is done in any one way. (p. 2)

I chose to follow the lead of these authors (Carter, 2006; Clouder & King, 2015; Johnson, 2013; Sidebotham et al., 2015) and include both positive and critical data, often with contrasting scenarios. I have used these contrasting scenarios and participant proposals to generate proposals for improved interprofessional collaboration.

Ultimately, AI was chosen because it encouraged participant engagement and reduced likelihood of causing or exacerbating tensions between LMC midwives and obstetricians. The lens of AI meant that questions in the research questionnaire for the current study were positively framed to direct participants to give their vision for optimal communication and how to achieve this. The literature suggested that relationships between New Zealand midwives and obstetricians were sufficiently positive that eliciting positive responses would probably occur. What was clear from the study participants was a willingness to discuss all issues they felt relevant to maternity care. This was despite, or perhaps because of, the interviews being conducted in an appreciative way. Participants described both positive and negative components of interprofessional communication and were able to offer suggestions for improvement. The 4D cycle of AI offered a framework that fitted well with the current study objectives, including managing negative content (Ludema et al., 2001).

3.1.5 The 4D cycle of Appreciative Inquiry

Practical application of AI to research involves a cycle described as the 4D cycle. The 4D cycle identifies four components; discovery, dream, design and destiny (Ludema et al., 2001; Trajkovski, Schmied, Vickers, & Jackson, 2013). The aims of the current study readily fitted the 4D cycle. The four components of the 4D cycle espoused by Ludema et al. (2001) are discussed in the context of the current study:

- **Discovery:** Study participants are encouraged to identify what currently works well. In this study, both participant groups were asked what worked well for them in interprofessional communication and to describe positive collaborative experiences. The positive approach encouraged identification of the best components of interprofessional communication. This approach generated many descriptions of positive interprofessional interactions, but there were also negative stories.

- **Dream:** Participants are invited to imagine how things would look in an ideal world. This phase gave opportunity to address negative components of interprofessional communication. Negative stories were acknowledged, and participants were invited to describe how optimal interprofessional communication would have looked in the situation described. For example, most participants were unhappy with use of fax and post to send letters between primary and secondary care services. This generated suggestions for improvement, for example, improved use of up to date communication technology was a common vision of participants.
- **Design:** Participants are invited to give practical advice on how to achieve the dream. This step followed logically from the dream phase when participants were asked for proposals on how to achieve their ideals for improved use of modern technology for written communication transmission. Several suggestions arose, including using email rather than fax and post for communication.
- **Destiny:** Participant involvement leads to positive change, and further discovery. In the discussion chapter of the study, proposals for optimising interprofessional communication were generated from analysis of the status quo and by reporting and developing participants' suggestions from the design phase. This phase led back to the discovery phase as practical suggestions to optimise collaboration were discovered. For example, it is proposed that email is adopted as a replacement for fax and post to transmit written communication.

3.1.6 Thematic analysis

Data was analysed using thematic analysis, with an inductive approach to analyse raw data to discover significant themes as described by Braun and Clarke (2006). Thematic analysis focuses on participants rather than researcher imperatives. "Thematic analysis is a method for identifying, analysing and reporting patterns (themes) of importance to participants within the data" (Braun & Clarke, 2006, p. 6). In midwifery literature, several authors who used AI as a theoretical perspective also analysed data using thematic analysis (Bilous, 2018; Maxwell et al., 2015; Norris, 2017; Sidebotham et al., 2015; Smythe et al., 2009). Thematic analysis is a theoretically flexible method of analysing qualitative data. It was chosen because it gave a way to organise and extract meaning from the study data in a way that was relevant to my interview questions and theoretical orientation. How thematic analysis was employed in this research is discussed in section 3.2.6.

3.2 Research method: Carrying out the research

3.2.1 Ethical approval

Ethical approval for the study was obtained from the Otago Polytechnic Ethics Committee on 11 July 2017 (Appendix 3). Support for the research to proceed was granted by the Kaitohutohu Office at Otago Polytechnic (Appendix 4). The role of the Kaitohutohu Office is to ensure that research is conducted safely for Māori, and that relevance of the research to Māori was considered, in line with principles of Te Tiriti o Waitangi.

3.2.2 Recruitment

To recruit midwifery participants, New Zealand College of Midwives (NZCOM) national office was approached to obtain permission to email the membership database of the study region. National Office referred me on to the regional NZCOM branch in the study location. The regional chair granted permission to use this region's email database to invite LMC midwife member participation and forwarded the promotional email to members in the study region (Appendix 5). The membership database includes LMC midwives, core midwives, consumer members and student midwives. The email specified that I was seeking LMC participants only. A PowerPoint presentation outlining the research proposal and seeking participants was delivered at a NZCOM regional meeting in the study area and describing the use of Appreciative Inquiry to assure participants that my agenda was positive. There was an immediate response to this email promotion. Some midwife participants were also recruited by word of mouth through other participants.

To recruit obstetric participants, a submission was made to the study DHB's research committee. Approval was gained to use the DHBs email database to invite obstetricians employed by the DHB to participate (Appendix 6). Approval to recruit obstetric participants was also granted by Te Puna Oranga Māori Consultation Research Review Committee (Appendix 7). The promotional email (Appendix 5) was sent via the obstetric email data base. There was no initial response to this email. Several months after completing most midwifery interviews, a PowerPoint presentation promoting the research was delivered by the researcher to obstetricians at a regular obstetric education meeting. The promotional leaflet (Appendix 5) was distributed at this meeting and a further email of the same promotional leaflet was sent to the obstetricians via their email data base. Recruitment was successful following the presentation and subsequent email. Of note, when the first email to obstetricians was sent, there was a severe shortage of obstetricians and registrars at the study DHB, which had improved somewhat by the time the presentation to obstetricians was delivered. This workforce issue may have contributed to initial lack of response. Subsequent

to submitting the research proposal, the small numbers of obstetricians in the study population was evident. As there was an initial lack of participant response from obstetricians, the participant criteria were expanded to include obstetric registrars and approval for this change gained from the DHB research committee (Appendix 9).

At the outset of research, a submission was also made to another DHB to seek permission to recruit obstetric participants. There was no response to this submission. Had there been difficulty recruiting obstetric participants from the first DHB a second attempt to recruit from this DHB or other DHBs would have been made. As adequate numbers were recruited from the local DHB, attempts to recruit from other DHBs were abandoned.

Posters promoting the research (Appendix 8) were placed in two primary birth units in the study region and on the DHB's delivery suite noticeboard. To my knowledge there was no response to these posters.

In total, responses were received from eight midwives, all of whom were recruited. There were responses from eight obstetric participants, but three did not engage with further attempts to contact them. Five obstetric participants were interviewed.

3.2.3 Participants

The participants formed two groups:

1. Midwife LMCs currently practising part-time or full-time in the study region.
2. Obstetricians or obstetric registrars currently practising part-time or full-time in the public sector in the study region.

Midwives not currently working or working exclusively as core staff were excluded, as were obstetricians currently working exclusively in private practice or not currently practising obstetrics. An obstetrician working both in public and private practice would have been eligible, as would a midwife doing a mixture of core and LMC work. The final participants were eight LMC midwives, three obstetricians and two obstetric registrars.

Ethnicity data was collected, but not included as it had potential to identify participants and participant numbers were too small for significant conclusions about influence of ethnicity on interactions. All midwife participants were female and had practised midwifery between 5 and 25 years. Seven midwives were urban-based, and one was rurally based. One obstetric participant was male and four were female. In the interests of maintaining anonymity, all were referred to in this thesis as female. The obstetricians had practised as consultants

between 4 months and 17 years. The registrars had practised as obstetric registrars between 10 and 20 months.

Most participants were known to the researcher. This may have aided recruitment but could have influenced the information shared or led to researcher bias. It led to occasional tensions in reporting critical or negative data as I felt some resistance to presenting participants from either profession in a negative light. The framework of AI assisted in managing these tensions, as solutions to barriers to interprofessional communication were sought from participants and in data analysis. Awareness of my positioning assisted in retaining a neutral stance as researcher.

3.2.4 Pilot

A semi-structured interview guide was designed, while understanding that interviews would be partly driven by participant responses (Appendix 10). Consultation with the researcher's primary supervisor and midwifery colleagues was used to refine questions. The interview guide was trialled with separate interviews with a midwife and a GP. As the study population of obstetricians and obstetric registrars was significantly smaller than the population of LMC midwives and recruitment of obstetricians was more difficult, no pilot was conducted with an obstetrician. As a result of the pilot and feedback from the two pilot participants, the order and detail of questioning was changed to improve flow. Data from the two pilot interviews was not included in the study.

3.2.5 The interviews

The interviews started with a predetermined question list but evolved with interview progression. Thirteen individual interviews took place. Seven midwives were interviewed in mid-2017 and one midwife and all the obstetric participants were interviewed in early 2018. Participants were provided with information before the interview (Appendix 5). Prior to commencing interviews, participants were asked if they had questions about the study. Any questions were answered. Participants were informed that they would be emailed a copy of their interview transcript for review and could remove or edit their responses. Participants were reminded they could withdraw from the study at any time up until they returned their reviewed interview transcripts to the researcher. Participants were informed that they could terminate or pause the interview at any time. Signed consent for the recorded interview to occur was sought immediately prior to each interview (Appendix 11).

Each participant chose their location of interview. Midwife interviews took place in midwife offices, in one instance at a midwife's home, and in another instance at the researcher's

home, at the request of the participant midwife. Obstetrician interviews took place at the hospital in obstetrician offices or clinic rooms. Registrar interviews occurred in the registrar training room. Interview duration was between 28 minutes to 1 hour 10 minutes. Interviews were recorded using two devices. The recording devices were kept in a locked filing cabinet at the researcher's home and recordings downloaded to and stored on a password protected desktop computer in the researcher's home office by the researcher. Only the researcher, her supervisors and the research assistant had access to recordings. The recordings will be deleted by the researcher five years after completion of the thesis. Transcribed anonymised data will be stored on the researcher's computer for five years then deleted and removed from the recycle bin by the researcher. In the thesis participant midwives are identified as 'MW' and a number, while obstetric participants are identified as 'OB' and a number. For example, OB1 was the first obstetric participant interviewed. This maintained anonymity while making it clear to readers to which professional group a quotation was ascribed. It was not stated whether the doctor participants were registrars or obstetricians as my primary supervisor, and I considered this might be potentially identifying.

The questions for each participant were designed to explore participants' experiences of communication at the primary secondary interface and familiarity with and utilisation of the Referral Guidelines. Following collection of demographic data, key opening questions were:

1. In your practice how do you communicate with midwives/obstetricians at the primary/secondary interface?
2. Can you tell me about a situation where optimal communication occurred?"
3. Are there any improvements you would like to see in regard to consultation and referral practices?
4. How would communication look in an ideal world?
5. How could we work towards optimising interprofessional communication?
6. Are you familiar with the Guidelines for consultation with obstetric and related medical services produced by the Ministry of Health (Referral Guidelines)?
7. How do you use the Referral Guidelines?
8. Are there any improvements you would like to see for the Referral Guidelines?

(See Appendix 10 for full interview guide)

After collecting some demographic data, the first question opened neutrally to elicit unbiased descriptions of the circumstances of communication. The second framed the study with the theoretical perspective of AI. The third acknowledged negative responses as well as positive.

Questions three, four, five and eight addressed the dream and design phases of the AI cycle. Questions six and seven were also neutrally framed, with six being a closed question.

Recordings were transcribed by a research assistant who signed a confidentiality agreement (Appendix 12). The researcher reviewed transcripts with the tape recordings running, correcting typing errors and removing identifying data. Corrected anonymised transcripts were emailed to participants with a request to check that the transcript was a true representation of their views, and to correct any misrepresentation or delete information they wish to exclude from the study. Two obstetricians and one registrar made mainly grammatical corrections to their transcripts. One midwife sent a two-page correction of a scenario to clarify the course of events and requested removal of another scenario that she felt was identifiable. No participants withdrew from the study or asked to stop or take a break during the interviews.

3.2.6 Analytical process

Six phases of thematic analysis identified by Braun and Clarke (2006) were used to analyse data. The relevance of codes to the interview questions and the manner in which they related to the theoretical approach AI were considered throughout the data analysis process.

Phase 1: Familiarisation with the data: Interview transcripts were read while the researcher listened to recordings, checked accuracy of transcription, and took preliminary notes. All identifying information was stripped from the data. The proofread anonymised transcripts were then emailed to participants to review.

Phase 2: Systematic reading and coding of data: All participant reviewed transcripts were systematically read and coded. A code is "the most basic segment or element of the raw data or information that can be processed in a meaningful way" (Braun & Clarke, 2006, p. 18). The codes were sorted into secondary 'like' groups, thus beginning to identify themes, using the qualitative software coding program NVivo version 12 plus. For example, the code "*... I was told a number of years ago that… the process is to contact the ACMM first and they'll direct you… they're very, very useful as a conduit*" (MW2), was put in a secondary group entitled "*Intermediaries in communication*".

Phase 3: When all data had been coded and sorted into secondary groups, secondary code groups were sorted into tertiary groups with a view to developing themes. For example, the secondary group "*Intermediaries in communication*" was categorised under the tertiary heading "*Communication circumstances*". The secondary groups of codes were sorted into the following preliminary tertiary categories for the write up of data analysis.

Guidelines familiarity, usage and limitations: This category included all references to the Referral Guidelines by participants

1. Communication circumstances: This included the communication medium (face to face, phone, letter sent by fax, email, post, or text messaging), and the different circumstances eliciting communication (emergency, consultation during birth, acute admission and non-urgent referral).

2. Interpersonal components: This category included all references to interactions between LMC midwives and obstetricians by participants.

3. Communication content: This was the smallest category identified and consisted of all references to the substance of communications between LMC midwives and obstetricians.

Some individual codes were discarded predominantly because they were off topic or were isolated findings.

Phase 4: Refinement of themes: The four tertiary groupings in Phase 3 gave a useful framework for managing and understanding the data but became restrictive of analysis and development of themes. The information emerging in phase 3 was reconsidered. A decision was made by the researcher and initial primary supervisor to go back and re-sort the secondary code groups. Each secondary group was typed, printed and sorted manually into logical groupings. Some secondary code groups were amalgamated. This phase took considerable time to determine the most important findings within the data.

Phase 5: Themes were further refined, defined and named. The themes initially developed from the data groupings were:

1. The Referral Guidelines: Strengths and limitations
2. Negotiating philosophical difference
3. Facilitating the three-way conversation

In line with the theoretical perspective of AI, positive action-based theme titles were sought. For example, rather than just identifying that there was philosophical difference between LMC midwives, the theme title ‘Negotiating philosophical difference’ identified that the research sought participants views on effective pathways through philosophical difference.

Phase 6: Generating the report: The themes were described, including appropriate uses of codes to illustrate these themes, followed by analysis and argument related to the research

question, with proposal of actions suggested by the themes. Positive aspects of communication and participants suggestions for improvement were sought in line with the theoretical framework of AI. When negative data arose, this was juxtaposed with positive data where possible and participant responses were analysed to generate proposals for improvement.

During the process of reporting these themes, it was recognised that findings relating to the Referral Guidelines fitted under a broader category of blurred boundaries at the primary secondary interface, with roles and limitations in clarifying these boundaries. This led to recognising that the order of themes should also be changed as the themes were interwoven and there was a logical progression through the three themes. The final themes described and discussed in Chapters 4-7 are:

1. Negotiating philosophical difference.
2. Clarifying blurred boundaries.
3. Facilitating the three-way conversation.

In keeping with the theoretical approach of AI, the first two theme titles include the action identified in the study as optimising communication. Thus 'negotiating philosophical difference' implies an action to improve rather than simply reporting more negatively 'philosophical difference'.

In October 2018, when the data analysis process was at Phase 4, the initial primary supervisor withdrew from her role. The initial secondary supervisor stepped into the role of primary supervisor and a new secondary supervisor was appointed.

3.3 Summary

The methodology was chosen as the most appropriate method of examining interprofessional communication between LMC midwives and obstetricians. AI was chosen as the theoretical perspective underlying the study. The advantages were ease of recruitment, and encouragement of constructive suggestions of how to move towards optimal interprofessional collaboration, promoting positive interprofessional relationships. The 4D cycle of AI fitted well with the research aims. The study was qualitative, using semi-structured interviews of 13 participants including LMC midwives, obstetricians and obstetric registrars.

The potential influence of my dual role as a colleague and researcher is acknowledged. I have endeavoured through adherence to research protocol, and methodology to ameliorate researcher bias.

Thematic analysis gave a straightforward pathway for analysis of data from research interviews. Using this process, three dominant themes emerged; negotiating philosophical difference, a need to clarify blurred boundaries, and to facilitate three-way communication. These are described and analysed in Chapters 4-7.

Introduction to research findings

Data analysis resulted in identification of three themes. The first was a need to negotiate differing philosophies between LMC midwives and obstetricians. The second theme was blurring of boundaries and professional responsibilities. This occurred commonly in the study DHB and clarification of these boundaries was important. The third theme was the role of three-way conversations between women, midwives and the obstetric team. These conversations were vital in promoting successful collaboration and woman centred care.

The lens of AI was used to gain insight into these themes. The data was examined to determine how philosophical difference and positive interprofessional relationships could coexist, what led to clarification of blurred boundaries, and how to best promote positive collaborative experiences through three-way communication.

Chapter 4, the first of three findings chapters, presents data describing philosophical difference in the presence of usually positive relationships, seeking explanations in the data of how these could coexist and means to foster collegial relationships. Chapter 5 describes participant experiences of the primary secondary interface and describes blurring of these boundaries. It explores instances when boundaries were clear, and what promoted clarity. The role and limitations of the Referral Guidelines in clarifying boundary issues is discussed. Chapter 6 describes how three-way communication was occurring for participants, and barriers to this. Instances in the data where three-way communication worked well are analysed to identify what promoted successful interactions. Participants' ideas for promotion of collaboration between midwives and obstetricians were then explored with a view to developing proposals to facilitate and enhance three-way conversations.

Chapter 4. Negotiating philosophical difference

4.1 Introduction

This chapter, the first of three findings chapters, explores participants' perspectives of the relationships between the two professions, the influence of philosophical difference and factors that facilitated negotiation through philosophical difference. The data identified that philosophical difference could lead to different understandings of primary secondary interface boundaries. These different understandings identified a need to find compromise satisfactory to women, midwives and obstetricians when philosophical difference occurred. Despite philosophical difference, participants described usually positive interprofessional relationships. In keeping with AI, participants' perceptions of what promoted positive interprofessional relationships in the presence of philosophical difference, and suggestions to promote collegial relationships, are described and where negative experiences were described, solutions were sought within participant responses.

4.2 Philosophical difference

4.2.1 Positive interprofessional relationships

While philosophical difference between midwives and doctors was acknowledged by midwife and obstetric participants in this study, a common theme of usually positive interprofessional relationships was widely reported by both participant groups. "*I often ring the WAU reg* [Woman's Assessment Unit registrar]*… and I generally find the information I get back is good and I'm usually happy with that.*" (MW1)

> *I think most of my communication with midwives is optimal, we're working in a tertiary setting I think people are very good at coming here… identifying a problem, asking what they need…* (OB1)

When asked to describe a situation when optimal communication had occurred, most obstetric participants reported commonly positive interactions with LMCs: "*…there have been lots of good examples*" (OB5).

The presence of commonly positive relationships in the study DHB suggested that philosophical difference need not be a barrier to effective collaboration. The data was examined to determine the nature and impact of philosophical difference and participants ideas on how to negotiate philosophical difference.

4.2.2 Differing philosophies

Both participant groups reported having different philosophies framing their practice, with midwives seeing birth as usually normal but sometimes requiring intervention, while obstetricians favoured more intervention: "*We've got such a valuable side to the whole thing… we know what normal birthing is… putting your hands in and interfering is not the only way to be doing it.*" (MW8)

> *I think when you have strongly different philosophical beliefs about what's safe and what you are happy to tolerate... I guess being in the hospital I'm very used to continuous CTG* [cardiotocograph] *monitoring. When I see LMCs who are happy with VBACs* [vaginal birth after caesarean section] *without requiring continuous CTG that does make me anxious. But… at least she's here and she's having some monitoring. I guess it just is that different belief on how to provide care.* (OB1)

In the preceding quote, OB1 acknowledged philosophical difference and its influence on practice, with a degree of discomfort, but with willingness to compromise which opened the door to negotiation between midwives and obstetricians on optimal maternity care management that also respected women's wishes.

Philosophical difference had the potential to contribute to blurring of primary secondary interface boundaries:

> *… the situation where I think there are barriers is that* [there are occasions when] *we're not all on the same page and all think that we're not trying to achieve the same thing… or the best for the woman and the baby. I think that's where the worst barriers come up.* (OB4)

This statement suggested that differing philosophies sometimes influenced collaboration between LMC midwives and obstetricians adversely. Scenarios when midwifery and obstetric philosophy were opposed sometimes revealed situations of power imbalance.

4.2.3 Power differential

Some participants referred directly or indirectly to power imbalance, with a tendency for medical philosophy to prevail over midwifery philosophy:

> *…I think it comes back to experience; if you're a new midwife out that's quite gentle and quietly spoken… you can be just, a bit overrun by them* [the obstetric team]. (MW7)

MW8 felt hierarchical difference was still a barrier for her:

> *… I feel like there's still hierarchical systems and that we as midwives don't sit anywhere near the top to be blatantly honest…* (MW8)

Power differential could be a confounding issue for effective communication, as recognised by OB2:

> *I think often the LMC picks up the phone probably because she's got a situation... But it's amazing how often when you say, 'well how many weeks is she?' that it's not at their fingertips… I recognise also there's a bit of a power and hierarchical differential and maybe LMCs don't always feel that comfortable about ringing obstetricians and maybe get a bit flummoxed…* (OB2)

In this study, power differential was emphasised when decisions about timing of delivery were made without discussion with LMCs. Some midwife participants reported instances where they might be happy to support primary birthing when the obstetric team recommended secondary care, noting that they did not usually get the opportunity to discuss this:

> *… they might well say this lady needs to birth at the hospital and this is why, but… actually I might be happy to support her through a primary birth if the risk factors aren't huge… there's never any discussion there, and then there's that huge anxiety from that woman and you know the woman's only giving me her side of the story not the side of the story of the obstetrician... in Women's Assessment Unit… often, the women are told that this can't happen but actually I feel that it can happen. As the primary carer who's going to be caring for her in labour...* (MW3)

MW3's statement suggested willingness to test the boundaries imposed by the Referral Guidelines, but her main issue was disempowerment through lack of three-way discussion. The midwife's ideal was to be involved in the discussion prior to decision making. The lens of AI suggests that three-way conversations would be likely to promote greater equality between the two professions through allowing negotiation, resulting in more satisfactory experiences for women and midwives.

Participants' language choice when referring to pregnant women sometimes unconsciously underlined power differential. Doctors usually spoke of *'patients'*, while midwives usually

used the more equalising term *'women'*. Midwives were not immune to using language that has been said to promote inequality between health practitioner and woman. One midwife and two obstetric participants regularly referred to women as *'ladies',* which has been described as a patronising term in literature (Furber & Thomson, 2010).

While some participants reported power differential favouring obstetricians, a shift in philosophy was expressed by OB1, who discussed a change in medical culture with reduction in power differential.

> *I think we've come a long way from the paternalistic medical model which was male dominated and 'I'm doctor and I say you do what I say'… I do think that the medical profession as a whole is a lot more aware and respectful of communication with patients. And therefore, also should be with other allied health colleagues… different people have different experiences and different ways of communicating and that's probably the only barrier. That you get people to appreciate the importance of good communication*. (OB1)

This obstetric participant perceived that a more respectful, facilitative approach to women's care was becoming the norm and should also be the norm in interprofessional interactions.

4.2.4 The woman's philosophy and choices

Both participant groups reported that differing philosophy may be that of the woman rather than the midwife. Participants identified that philosophical difference between LMC midwives and obstetricians became most evident when women made choices opposed to obstetric beliefs. Midwives expressed a greater level of comfort than obstetricians with supporting women whose wishes might not fall within the Referral Guidelines. MW3 described the Referral Guidelines as a rulebook, but with a degree of flexibility. "*I am quite diligent with the guidelines because of course that's what we're bound by, but I also allow the woman to make a choice about whether they want that referral…*" (MW3). Use of the word *'allow'* suggested MW3 retained some control over the woman. However, she acknowledged women's choice in this statement, aligning with NZCOMs philosophy statement (NZCOM, 2015). MW3 appeared comfortable with women's alternative choices. In contrast, in the following quote, OB4 acknowledged women's choice but expressed discomfort with choices not consistent with obstetric view of best practice guidelines, aligning with RANZCOG's mission statement:

> *... different ideology of what's acceptable best practice… it might not be that that's what the midwife thinks. It may be that the midwife is… supporting a woman who wants to do something that's not necessarily seen as best practice… I guess, some of us will struggle with that.* (OB4)

While OB4 was unhappy with alternative choices made by women, this statement acknowledged that midwives may also have discomfort with some women's choices. The midwife may choose to support a woman despite her declining aspects of care, putting in place alternative strategies to improve safety for the woman. Supporting women's informed choice that the midwife does not necessarily agree with may keep women safer than if the midwife withdrew from care. OB4's statement of understanding might open the door to a pathway to negotiate philosophical difference and reach understanding and compromise acceptable to woman, midwife and obstetrician.

Midwife participants expressed commitment to supporting women's decision making when alternative decisions were contemplated, while ensuring informed decisions were made:

> *... depending on what they're deciding not to have a referral for and how comfortable I feel with that… it is their choice but if I think it's a safety thing then I would encourage them strongly to go with that* [the recommendation of the Referral Guidelines]*... as long as they're making an informed choice… you have to make sure they actually understand that if you're not going to see an obstetrician… this is what could happen. And then documenting everything.* (MW1)

This scenario demonstrated understanding of the requirements of the Referral Guidelines for informed consent and documentation when consultation was declined.

The Referral Guidelines acknowledge women's right to decline care and contain clear direction as to what should occur when recommended care is declined (MoH, 2012). The right to informed consent, including the right to refuse services or withdraw consent to services was referred to by MW3:

> *... in my practice, it's a discussion with the woman every time, because they can decline.* (MW3)

MW4 demonstrated her understanding of the Referral Guidelines' requirements for informed consent when a decision is made not to follow a specific referral guideline:

> *... if you decide not to go along with a specific guideline you have to have… a very clear rationale that you've discussed with the woman...* (MW4)

Although this wording suggested the midwife made the decision rather than the woman, MW4 elaborated on this statement, taking a facilitative approach to discussing the Referral Guidelines and recommending referral. Her comments acknowledged women's right to choose and she appeared comfortable with the right to decline recommended care:

> *I think the guidelines are really good… I usually tell the women that the guidelines are for me to guide them as to what their options are… because we know this about you, you're entitled to this referral, it's my job to offer it to you. It's your job to decide if you want it or not and to discuss it with me.* (MW4)

In the quote below, OB4 also understood the need for informed consent but found decisions inconsistent with hospital protocol uncomfortable, expressing fear of adverse outcomes and subsequent litigation:

> *… we can only inform them* [women] *and at the end of the day… the decision they make that's their choice. But I think the thing which I struggle with is it often puts us at some risk as well.* (OB4)

Legitimate cause to fear adverse outcome was described when care was declined due to a woman's choice to reject obstetric intervention:

> *... years ago,... we had twins that were both cephalic and… I think she'd had kids before… these kids could have both come out vaginally, but the woman refused to have syntocinon on between the twins. She went out of labour, got chorioamnionitis, ended up being sectioned* [having a caesarean section] *for the second twin 24 hours later… baby was alright but the woman didn't want a section and had she had just a little bit of synto between the twins and kept contracting she may have* [avoided a caesarean section]... . (OB4)

In the above scenario a woman declined obstetric intervention until very late resulting in an adverse outcome. There was no information given about the woman's perspective, the midwife's advice to the woman, conversations with the obstetric team, or documentation. Three-way communication may not have occurred in a timely manner, perhaps because the woman declined to participate.

Two obstetric participants reported that such situations of conflict between LMC midwives and obstetricians due to women's choices had become less common with time. "*I don't know why we don't get so many of those* [situations where LMC midwives and the obstetric team were in conflict], *but we used to get a lot of those.*" (OB4)

> *We used to have a lot of midwives who were very happy with more holistic care… herbs for active management of third stage… intermittent monitoring for someone who probably should have continuous monitoring, trying to keep it natural when it potentially isn't. But I think that's not that common these days…* (OB1)

As two obstetricians expressed this view it appeared there had been a change in this DHB so that LMC midwives and obstetricians were more often aligned with each other as to an agreed pathway through maternity management. No explanation for this change was proposed.

4.2.5 Midwives as advocates

Midwife participants reported a positive component of their care for women in their role as advocates, aligning with midwifery philosophy which aimed to promote woman centred care. This sometimes included preparing a woman for what to expect and what to ask in a consultation where the midwife was not present:

> *… I had a lady… who's* [baby is presenting as] *breech, who's gone in for a conversation around ECV* [external cephalic version] *and she doesn't want it… I've prepped her already… so I know she's making a choice* [based] *on informed consent… she knows exactly why she doesn't want it… I know she'll go to that meeting saying she doesn't want it.* (MW1)

The importance of advocacy was highlighted by OB2 because LMC midwives usually provided continuity of care antenatally, while women frequently saw a different doctor at each presentation to secondary care services so that the LMC was much more familiar than the doctor with individual women's circumstances: "*Even if they come into antenatal clinic several times… you're seeing them maybe only once and* [next time] *it's going to be somebody else… you're totally reliant on the LMC's perspective.*" (OB2)

OB2 acknowledged lack of continuity of care within the obstetric service and, due to this lack of continuity, recognising the importance of receiving full information from LMC referral letters. MW1 envisaged an ideal where there would be greater continuity of care

provided by the obstetric team: "*…when someone goes to ante natal clinic, them seeing the same doctor each time would be ideal… because then they're getting the same story and they've got that partnership as well*" **(**MW1). Meantime, as continuity was provided by LMC midwives but not by the obstetric team, the advocacy role sat with the midwife who had a long-term picture of the woman's pregnancy rather than a snapshot as seen in secondary care clinic. Midwives were more likely to be aware of social contexts and specific areas of concern for women that might not be evident in one-off consultations.

Midwife participants found that advocating for woman's choice sometimes caused tensions between midwives and obstetricians which could lead to midwives feeling defensive. When these tensions occurred, MW4 felt her practice was sometimes unfairly judged:

> *… when you've got women who may have made alternative choices and so the position you've ended up in… you could have probably done better but that was because they'd* [the woman] *declined* [care]*… and then you've been left holding the baby as it was and then someone comes in and is… critical of where you've ended up. And you're like… can I tell you the whole story of why we've ended up here?* (MW4)

MW4 underlined the need for effective communication between LMC midwives and the obstetric team on an equal footing to promote safe care when alternative choices have been made by women.

Midwives stressed the need for evidence-based informed consent, showing strong commitment to safe care. Some discussed their preference for referring women for obstetric consultation with the obstetric team before agreeing to support alternative positions:

> *… this woman… she'd had two past Caesareans and she was thinking about a VBAC, but you know you need to have that conversation about whether that's safe… I wanted her to have that conversation* [with the obstetric team] *before saying 'yes, I'd support her in that'.* (MW1)

In the quote above, MW1 followed the recommendation of the Referral Guidelines for a consultation with secondary services when a woman has had a previous caesarean section. She did not discuss what information she provided the woman with, which may mean that she deferred to obstetric opinion. Usual practice within the study DHB was to recommend elective caesarean section if a woman had had two or more previous caesarean sections. Thus, there was potential discord between evidence supporting the safety of VBAC after two

or more caesarean sections (Cahill, Tuuli, Odibo, Stamilio, & Macones, 2010; Landon et al., 2006), and deferring to obstetric opinion.

Obstetric participants wanted to know what the standpoint of the woman and midwife was, particularly if this was outside obstetric recommendations. Obstetricians looked to midwives to inform them of alternative standpoints that women may have held. They wanted the opportunity to have a consultation with women who make decisions inconsistent with the guidance of hospital protocols and guidelines to put the obstetric viewpoint, although this did not acknowledge women's right to decline consultation or midwives' role in facilitating informed consent. Interactions where three-way communication occurred were more likely to result in successful negotiation between midwifery and obstetric philosophies. OB2 observed that a clear statement of the issues by the LMC midwife facilitated good communication: "*... a good referral letter to me would also include fair bit of detail about their social circumstances and what their philosophy is. Because I think that really affects how you counsel ladies.*" (OB2).

OB3 gave a vision for optimal communication and described a scenario where good three-way communication left doctors comfortable that a woman had made an informed decision for a vaginal breech birth:

> *When we know what this woman wants clearly… then you kind of stand behind and say okay she's clear what she wants, if this happens, she's happy for me to come in… there was this woman who wanted a* [vaginal] *breech delivery and was very much clear what she wanted. She knew she wants a doctor to be in once she's fully dilated and starts pushing… we knew what she wants… When we said, 'we need CTG monitoring' she declined… she knew what the risks are, and she had said 'I will be responsible for this'. I always document it. So it made it easy for us, not to keep worrying… we won't be involved but we'll stand beside…* (OB3)

It was more correct to state that the obstetric team understood their role rather than that they were not involved. The positive message was that three-way negotiation clarified understanding of the respective roles of the LMC midwife and the obstetric team. The woman's involvement in discussions supported woman-centred care although this relied on the woman being sufficiently proactive to stand out against obstetric opinion. Fear of adverse outcome and risk to health practitioners was expressed in Section 4.2.4 by OB4. OB3's observation that good communication reduced worry for the obstetric team demonstrated

that good communication could mitigate fear. Three-way conversation clarified the boundaries between primary and secondary care with a satisfactory outcome for woman, LMC midwife and obstetrician.

In another scenario, MW4 described how a woman accepted a referral recommended by the Referral Guidelines, but reached an informed decision outside current obstetric best practice guidelines, facilitated by effective three-way communication:

> *… I had a client that had gestational diabetes… back then they were inducing them at 38 weeks. And she made the decision from all the information and consultation that she would be induced if she was going to be at 40 or 41 weeks because her gestational diabetes was well managed… we still went through the process of referral and consult and then she made her decision… I tend to always include the multiple disciplinary team in decision making.* (MW4)

This scenario demonstrated that it was possible to negotiate philosophical difference and reach a satisfactory conclusion with good three-way communication.

OB3 recognised the importance of collegial communication between obstetricians and midwives to negotiate alternative plans to support women who choose to decline attendance for consultation:

> *… if the woman declines, we can still ask you* [the LMC midwife] *to follow this woman and do the growth scans in the community and refer back to us. So, the guideline is still there, it might be not followed in the hospital, but it can be followed in the community.* (OB3)

OB3 described asking the midwife to carry out a task, not telling her what to do, implying negotiation.

OB5 acknowledged differing philosophy while discussing the importance of coming to an understanding of those differences to enhance communication and compromise between both professions:

> *I think traditionally no matter where in the world you are, often doctors will have a different view to birth than midwives will. And a lot of that is just understanding why the midwives believe a certain thing and why the obstetric team may have a certain viewpoint and trying to work somewhere to come in between that…* (OB5)

This acknowledgement highlighted further the need for three-way communication so that the optimum pathway for safe woman-centred care could be negotiated, while expressing willingness to engage in processes to facilitate negotiations.

4.3 Factors promoting successful negotiation of philosophical difference

4.3.1 Respect, trust and kindness

Trust, respect and kindness were identified by participants as promoting positive communication between midwives and obstetricians. Midwife participants stressed the need for respectful interactions and reported that this commonly occurred. However, judgement and lack of trust were sometimes reported with potential to undermine communication. Busyness, overwork and fatigue posed potential barriers to collaborative practice. Being listened to and included in communication were important to both participant groups. MW7 reported feeling respected in an acute situation because she was listened to:

> *I said, 'just had the first twin'! And I was supporting the tummy for the second one and everybody moved with speed. And I guess there probably was less talking and* [the obstetrician] *could see what was in front of them… I said to him, 'this is why she was being induced' and I was talking and no one else was questioning me… and everybody just manoeuvred.* (MW7)

MW8 reported varied experiences with her interactions with the obstetric team, sometimes feeling judged and sometimes respected:

> *… I sometimes feel like I'm not recognised as the LMC… I feel a little bit like I'm a support person… when you're in a primary setting and the shit hits the fan, then you go to the secondary setting with your scenario and often you feel very judged. Because you haven't done this, or you haven't done that. But actually, things are normal until they are not… when they are not, that's when we don't stay in a primary setting. And so we end up there* [in the hospital] *with our not normal situation because that's what is meant to be like. But often you get stigma attached to you.* (MW8)

MW8 then described a more positive experience:

> *… the communication between myself and the obstetrician was excellent… I had a woman who was having an induction of labour…* [there] *was a massive brady* [bradycardia]*… and the obstetrician came in and I said to him, 'she felt faint, and then we've had this prolonged brady and the baby's*

> *not recovering'… even though they had a staff midwife there he was talking with me. And then he said, 'okay cat 1 caesar'* [category one caesarean section; the most acute grade of emergency caesarean section] *and so we went, and we had a very pale baby and an abruption… she'd been put under general anaesthetic so after the baby was born… I went out with the baby to dad and waited until she was ready for recovery and once the obstetrician had finished, he actually came out and he was looking for me. To give me a complete handover.* (MW8)

Using a lens of AI identifies that the difference between the two scenarios for MW8 was that when she was acknowledged, listened to and treated with professional respect, the experience was positive.

Two midwife participants felt that more senior obstetric colleagues were sometimes more respectful and trusting of midwifery colleagues and believed this reflected the doctor's confidence level. MW7 stated she was always respected by obstetric colleagues but qualified this statement:

> *I've always felt listened to… . They are respecting… Interestingly the higher up the chain they come, the more patient they are… I think, they're more secure… they have nothing to prove.* (MW7)

MW2 discussed two scenarios of shoulder dystocia where she experienced differing levels of respect from attending obstetric registrars:

> *… we'd* [transferred] *from* [primary birth unit] *with a big baby that was not progressing quickly enough… I phoned the registrar… she came immediately but we were having a baby at that point. Shoulder dystocia and she* [the registrar] *was very good at… keeping her hands off and just letting me manage that situation… Which we did. Managed it perfectly fine… I've been in another emergency situation earlier this year, with a shoulder dystocia… I rang the emergency bell… as soon as the registrar came in, she basically just pushed me out of the way and grabbed the baby and put her hands in there. But actually, we were managing perfectly well but we certainly needed extra hands... I really didn't appreciate being just shoved out of the way… I also think it's about the doctor's… lacking their own confidence because… the doctor who took over was certainly less experienced…* (MW2)

MW2 identified that emergencies were optimally facilitated when the practitioners worked together as a team, and the doctor was willing to trust the midwife's skill. MW2 put the difference in trust by the doctors down to a more experienced practitioner being more trustful. She did not state whether she knew either practitioner better than the other. A doctor might have been more willing to stand back if they knew the practice of the midwife. Trust requires confidence in self and knowledge of the other to promote willingness to take the risk of not intervening.

Midwives were also described by some obstetric participants as acting disrespectfully towards doctors which was also counterproductive to good communication. An obstetric participant described a scenario where a midwife's choice of language was undermining, and felt that the midwife could have queried the decision more constructively:

> *… the midwife said… 'are you just going to wait for the baby to crash and burn' …and that language wasn't very helpful. Fine if she felt very strongly, you can have that discussion outside, but having that in front of the patient means that that is the perception the patient has. And if it then goes wrong, then it comes back on the obstetric team.* (OB5)

It may not have been possible to have the conversation outside depending on the acuity of the situation. However, choosing more neutral language might have improved the communication. OB1 described an ideal for interprofessional communication while echoing MW2 and MW7 in noting that sometimes less experienced doctors may be less respectful:

> *… people should be kind to each other and should speak to each other like they want to be spoken to. Even when I try and do that, I know sometimes… I have juniors that aren't quite as obliging. And I think it's respecting each other and respecting what else other people have to do…* (OB1)

Respect and trust between the two professions were promoted by using respectful language, including both LMC midwives and obstetricians in conversations, and by listening and engaging in three-way communication. It was positive to discover that both participant groups made comments suggesting there was modelling of respectful behaviour by obstetricians in the study DHB. Being known to each other promoted respect and trust.

4.3.2 Being known to each other

The advantage of knowing each other was expressed strongly by both participant groups, promoting trust in clinicians' practice, better understanding of each other's philosophy,

making it easier for midwives to approach obstetricians, and facilitating communication in emergencies when names and roles were known:

> *... when you've been around for a while and you know them, you probably are more able to... go up to the hospital and knock on their door... the longer you've been in the job, the more solid it is for communication.* (MW7)

> *... when you know each other, things work better but I don't know what the solution is. You have to get to know each other first for that to happen... now because I've been here for a while I have quite a good relationship with some of the LMCs... which is quite nice because you build up more of a trust. That's something I found very difficult at the beginning because it's so different from* [overseas location of her medical education]. (OB5)

OB5's observation suggested that collaboration would improve if new doctors and LMCs had more opportunities to get to know each other, perhaps outside of the workplace context. Successful negotiation of philosophical difference was promoted by being known to each other: "*... we all know that we all have different philosophies and styles, and so do the obstetric team... when it's someone that... you've come across before that does... make it a bit easier if you know which way they lean...*" (MW4). When participants were not known to each other, they reported feeling more likely to be judged which could impede communication. The rural midwife participant reported less contact with the secondary care team due to geographic isolation, with contact commonly in stressed situations:

> *One of the hard things I find because I'm not there that often is you don't get to know the team that well... and there's someone new there that you've never met before and it works both ways, they don't know you and you don't know them so... we don't have a professional understanding of each other.* (MW4)

OB2 discussed practical difficulties in emergencies, when she did not know the LMC, and when she was not recognised as the obstetrician:

> *I often find it very difficult because... I don't know their* [the LMC's] *name. And that's one of the key things in an emergency is you say, 'Rachel can I get you to...', because you have to get people's attention. I remember an emergency last week and I did end up saying 'lovely LMC' because I didn't*

> *know her name… I can spend a whole load of time doing something with the patient and then they say to me are you the midwife? I'm not offended at all… they wouldn't understand that a midwife didn't do a forceps delivery necessarily… on delivery unit everybody just wears the blue scrubs, apart from the LMC.* (OB2)

The quote above recognised a need for clear name and role identification for all health professionals. OB2 proposed that different coloured scrubs for different roles might improve role identification.

Participants reported that being known to each other was promoted by shared education, interdisciplinary meetings where all were empowered, and social interaction. Participant obstetricians reported that the study DHB provided some shared events including occasional education sessions, perinatal mortality meetings and sporadic other events. OB2 used facilitative language to discuss her personal commitment to promoting shared education:

> *I'd love to see more…coming together of midwives and doctors… that's in a small way what I've tried to facilitate… with the workshops that we've done… I'd love to have midwives in a learning space, to try and just nurture relationships... .* (OB2)

Midwife participants' proposals to promote collegiality included open days at birthing units for doctors, regular social events and introducing new DHB staff members and LMCs in DHB newsletters to improve familiarity with each other.

> *… we get this monthly email from* [the DHB], *with all the updates… I would like a little bit more information like, so and so's leaving and here's the new person, here's the photo of them and they've started and just so we all kind of know who each other is a little bit more…* (MW4)

> *… maybe* [have] *a twice annual social event where we are all invited...* (MW4)

> *… a few open days at the hospital and the birth centres and* [if] *they* [medical staff] *came down to the birth centres as well.* (MW7)

These positive suggestions to promote collaborative communities for LMC midwives and the obstetric team could be readily implemented by the two professions.

4.4 Philosophical difference: Summary

Philosophical difference has been identified in overseas literature as a source of tensions between the two professions which can lead to breakdowns in communication and be a barrier to collaboration. In this study, participants were aware of different philosophy, but both participant groups considered they had usually good relationships with each other, meaning negotiations could be more readily facilitated. Positive interprofessional relationships were promoted by trust, respect and kindness. Trust and respect were promoted by being known to each other. Participants had positive suggestions to facilitate getting to know each other.

Potential for philosophical difference to lead to blurring of boundaries at the primary secondary interface was identified. Blurred boundaries are addressed in Chapter 5. Power differential favouring obstetric philosophy was discussed. Participants from both professions expressed willingness to communicate and compromise. Effective three-way conversations promoted effective communication. When effective three-way communications occurred, both professional groups were usually satisfied with their interactions. Facilitation of effective three-way conversations could reduce power differential when women, midwives and the obstetric team were all able to have their concerns addressed. Three-way conversations were identified as important to negotiating philosophical difference, protecting woman centred care and informed consent, while working for optimal outcomes. Three-way conversations are addressed in depth in Chapter 6.

Chapter 5. Clarifying blurred boundaries

5.1 Introduction

One consequence of different philosophical perspectives of midwives and obstetricians was different understandings about the boundaries of where primary care ended and secondary care began for the two professions. The second significant theme to emerge from this study was that participants from both professions recognised times when primary secondary interface boundaries were blurred and that there was a need to clarify these boundaries. This chapter explores interprofessional differences in participants' experiences of the primary secondary interface. AI was used to identify scenarios where boundaries were clear. These scenarios were analysed to assess what promoted clarity. When blurring of boundaries occurred, means to clarify these boundaries were sought. The role and limitations of the Referral Guidelines in clarifying blurred boundaries are discussed.

5.2 Blurred boundaries: Who is responsible?

The Referral Guidelines provide a framework for deciding which women should be recommended for referral to secondary services. Section 88 defines what is contractually obligated and funded. Despite these documents both participant groups described instances when boundaries remained unclear. When a referral to secondary care occurred, a need for clarity about who was responsible for any ongoing midwifery care required after referral to secondary services was identified.

5.2.1 Differing interpretations of the primary secondary interface

Boundaries between primary and secondary care may be interpreted differently in different DHBs, demonstrating that the Referral Guidelines do not cover every primary secondary interface interaction, and identifying this as a potential cause of tensions between professions:

> *Communicating with the team… plus or minus the LMC* [midwife] *who may come in and be involved in the beginning or part way through the labour… some pretty challenging communication there with the whole secondary care and which ones* [LMCs] *do and which ones don't* [provide aspects of secondary midwifery care] *and the differences with how I've worked at* [other DHB]*... that's something that I have learned very quickly from working here…* (OB2)

MW8 perceived that sometimes the obstetric team appeared to be inappropriately involved in women's care:

> *There's been times when I've been looking after a woman who probably was primary care… and they've come in and made a plan of what I should be doing when I'm actually being responsible for her… I don't see how an obstetrician coming in and making a plan for a woman who's in for primary care is appropriate…* (MW8)

This statement suggested improved communication was needed to clarify roles and responsibilities. A possible explanation could be confusion when a low risk woman under primary midwifery care chose to birth in a secondary care facility. Alternatively, there may have been consultation with the obstetric team antenatally and an unclear perception of whether the obstetric team retained a role in the woman's care. Assessed through an AI lens, appropriate three-way communication on admission might have resolved this scenario more satisfactorily.

5.2.2 Blurred boundaries antenatally

LMC participants discussed incidents where they found it unclear who should be responsible for care after secondary care consultation, and where communications contained incomplete information which could not be queried. LMC midwives do not receive extra funding to provide extra care generated by secondary care conditions. However, it is within their scope of practice to provide secondary midwifery care in collaboration with obstetricians. If there is consultation without transfer of clinical responsibility, there is a contractual obligation to continue to provide midwifery care under the terms of Section 88 because the woman remains under the LMC midwife's responsibility. Where secondary care generated extra care requirements for the woman antenatally, LMC midwives reported usually providing the extra care:

> *… I just got a text the other night from WAU… which said that my woman had been there… raised blood pressure. She* [the woman] *text me later to say… 'you need to check my blood pressure in two days' time'... she's 27 weeks, she's got essential hypertension, she's got a BMI of 53, she's got a previous* [caesarean] *section, she's going to be seen a number of times, in that system… really? Is this my job?... The communication I then had… a text from the new WAU communication… saying that they'd seen her, and her follow up was* [in] *a week, with a scan and a follow up with the obstetric*

> *team... There was no request for repeat blood pressure… I didn't actually know can I reply to that text and say, 'she says she needs a repeat blood pressure?'...* (MW2)

Under the Referral Guidelines, consultation with secondary services is recommended for hypertension, the reason for the referral, and for women who have had a previous caesarean section. For BMI greater than 40, transfer of care to secondary services is recommended. There are no recommendations around the gestation at which hypertension manifests. Transfer of care should result in transfer of responsibility. In the scenario above there was blurring of the boundaries between the ongoing responsibilities of the LMC midwife and the secondary care team. The Referral Guidelines did not absolutely clarify who was responsible for providing the extra care required, the communication contained insufficient information, and no three-way negotiation occurred. In contrast, a more satisfactory interaction was described by MW1:

> *… one of the recent ones would be someone whose* [baby's] *growth had dropped down to the 10th centile… she lived in* [semi-rural location]*... they saw her at* [secondary care clinic] *and then made a plan with us after communicating with us…* [to] *have scans in the community… they got what they wanted with the scans but it was woman focussed because she could just go to* [radiology unit in her home town]*… it meant more work for us but we were happy to do that because it kept her out of the hospital… we still did the monitoring, they're happy, we're happy… I guess that was a phone call as well… we were both happy with what we were doing...* (MW1)

The Referral Guidelines recommend consultation when scans suggest the baby is small for gestational age (SGA) with an estimated fetal weight on ultrasound scan less than 10th centile on a customised growth chart. MW1 observes that satisfactory communication was promoted by a timely phone call where the woman's needs were addressed and the roles of the obstetrician and midwife were negotiated, clarifying the primary secondary interface boundary. Using AI to interpret, the difference between this scenario and the previous one was that the Referral Guidelines' requirement for three-way communication was followed in the second case. Analysis of these two scenarios identified that when three-way communication occurred after consultation, this resulted in negotiation of a more satisfactory outcome for the woman, LMC midwife and obstetrician.

5.2.3 Emergency care; Who is in charge?

Collaboration and negotiation between LMC midwives and the secondary care team was particularly important in obstetric emergency situations to ensure safe outcomes for mothers and babies. Participant midwives reported that communication in emergencies commonly went well, suggesting boundaries might be clearer in emergency situations, possibly because all three participants in the negotiation were present:

> *Most of the time when you call for emergency care everyone is working hard together to get the correct outcome… I've had a category one caesarean section called for a placental abruption… the obstetric staff were really good...* (MW3)

OB4 expressed an expectation that in an emergency the LMC midwife would lead care until an appropriate specialist was available, at which point negotiation as to who should take the lead should occur. This is in line with the requirements of the Referral Guidelines for emergency care:

> *… the LMC needs to take leadership while we find out what's actually going on and then whoever's more appropriate to take over.* (OB4).

OB4 provided interesting commentary on the process of choosing the lead in emergencies, with a scenario where an anaesthetic registrar managing an emergency deferred to OB4 unnecessarily as the more senior doctor. This demonstrated a decision being made based on hierarchy that may not have been necessary or appropriate:

> *I think it depends on what the situation is as to who takes the lead, I don't think the SMO* [senior medical officer] *should always take the lead…* [for] *something significantly serious like a seizure and* [if] *I was the most senior there I probably would take the lead… if an anaesthetist was there… I don't think it matters whether the anaesthetist takes the lead, or we take the lead. And I've been in a situation… this is in anaphylaxis, the patient collapsed, and our registrar and the anaesthetic registrar were both there first… and then the obstetric registrar came and found me… it muddied the waters… the anaesthetic registrar was probably better at dealing with anaphylaxis than I was. But because I was more senior than him… I felt… that he felt uncomfortable making decisions… we kind of did it together.* (OB4)

OB 4 discussed another scenario when the lead was not appropriately identified:

> *This was a scenario… that I wasn't involved in, where someone had an eclamptic seizure… the anaesthetist was there, SMO was there, registrar was there and various other people. And the SMO was saying that they let the anaesthetist be the lead because they felt that that was the most appropriate. But I don't think anyone had actually signalled that the anaesthetist was the lead… you've got to make sure that… whoever's the lead knows they're the lead… .* (OB4)

Such lack of clarity in obstetric emergencies has been documented in the literature (Guise et al., 2011). Interdisciplinary scenario-based training has been shown to improve practitioner confidence, knowledge and performance and reduce time of responses in obstetric emergencies (Lutgendorf et al., 2017). This identified that in the study DHB, there may have been a need to improve teamwork in emergencies. On being asked how emergency care teamwork could be improved, OB4 identified that the DHB was addressing this need, by offering PROMPT (Practical Obstetric Multi-Professional Training) study days, to LMC midwives, core midwives and obstetric staff in the study DHB. PROMPT study days involve simulation of emergency scenarios to educate interdisciplinary groups on teamwork to optimise outcomes.

5.2.4 LMC provision of secondary care in labour and birth care

Blurred boundaries were marked when the secondary care team were involved in labour and birth care. While participant midwives reported they had some involvement in providing secondary midwifery care in labour, participant obstetricians reported that provision of full secondary midwifery care by LMCs had become less common than in the past:

> *… for things like inductions, a lot of midwives aren't being involved with inductions. So before it was more around making sure that the midwife was available for her woman, for the induction because she wanted to be part of it. Whereas now, most of the midwives aren't really wanting to be a part of it…* (OB4)

In the preceding quote, it was likely that LMCs were expressing reluctance to carry out secondary care, but it was perceived by the obstetrician that LMCs wanted no involvement in birth care, which the obstetrician felt obviated the need to discuss timing of induction of the labour with the LMC.

A very different position was held by midwife participants, who clearly intended to attend the labours of women in their caseload requiring induction of labour and expressed frustration when timing of induction was not discussed with them.

> *before they make big clinical decisions like inductions of labour and Caesarean sections… there needs to be a discussion with the midwife.* (MW2)

Applying AI to these observations suggested that more proactive communication between primary and secondary care was needed to find comfortable common ground over timing of inductions.

Obstetric participants did not always fully understand the limits of primary midwifery care under Section 88:

> *… another real bug bear of mine is when there's a third-degree tear after a normal delivery and I go to theatre. And the LMC doesn't come and I know maybe sometimes they're exhausted, and I know sometimes if there's things to do for the baby she might need to stay. But even just to come with her, you know even if you're not staying the whole time but just to come with her and check that she is okay… ."* (OB2)

A third-degree tear constitutes a transfer of care under the Referral Guidelines; therefore, the LMC was justified in handing over care. The issue of the LMC continuing to provide support she was not contracted to provide was more complex. No other primary care practitioner is expected to continue providing care in a secondary care setting, but the expectation was that the LMC should stay. This identified that greater understanding of limitations of LMC midwives' responsibilities by obstetricians might improve interprofessional understanding.

Some midwife participants noted that different midwives offered differing levels of secondary care in labour, exacerbating confusion for secondary care staff as to when handover to core midwifery staff should be negotiated. "*Some midwives do just completely hand over and step away when it becomes secondary* [care], *and others don't. So that kind of muddies the water...*" (MW4).

OB1 understood that handover may be supported by the Referral Guidelines or DHB policy, but was happy to collaborate with LMC midwives who chose to provide secondary care: *"LMCs are aware of what's usually handed over and what's not so, the guidelines… give*

more clarification about who should be handed over. But if the midwife wants to stay and look after the woman, we don't say no" (OB1).

Some LMC participants discussed providing secondary care while expressing unwillingness for this to automatically occur:

> *... I do run epidurals and syntocinon, but I want to do it on my own terms… if she's a primip* [primigravid woman] *and she's just had an ARM then there's no way I'm coming in to do that because it will be hours… if it's an augmentation of labour and she needs an epidural that's a little bit different… .* (MW1)

Anecdotally, participants' responses in this study suggested provision of secondary midwifery care by LMCs was becoming less common in the study DHB. The issue of whether secondary care should be provided by LMCs was a source of tension and there was an identified need to address this both case by case and at a governance level. Analysis using AI suggests that improved processes to acknowledge secondary midwifery care provided by LMCs and greater understanding amongst secondary care practitioners of the contracted obligations of the LMC could reduce this tension. Three-way communication was needed in every instance where consultation or transfer of care occurs to negotiate responsibilities of LMC and secondary care team. Shortage of secondary care staff was identified as a confounding issue.

5.2.5 Need for improved staffing levels

At the time that most midwife participants were interviewed, the study DHB was experiencing an extreme shortage of obstetricians and registrars. "*Ideal world. I guess more obstetricians would be the answer. Because they're more available… and not so much delays in decisions*" (MW1). The shortage of obstetric staff had improved somewhat several months later when obstetric interviews took place. However, both obstetricians and midwives reported insufficient numbers of core midwives as an issue at times: "*…often I want to hand over care… but if there's no staff it's a no.*" (MW1)

> *… one of the most frustrating things when I'm in emergency with LMCs… invariably I get some sort of comment about how knackered they are and how long they've been there for the birth and particularly if it's a post-partum complication they just want to hand over and go… sometimes that's really difficult because there might not be another team midwife* [to hand over to]. (OB2)

Participants reported feeling overworked and fatigued, reducing ability for obstetric participants to make phone calls, and causing stress for both professional groups. Both participant groups reported instances when they could not contact each other via phone. Doctors cited busyness as a reason why they sometimes omitted phoning LMCs:

> *I think sometimes due to time constraints and the busyness of what happens especially somewhere like Women's Assessment Unit, we don't always update the LMC as much as we should… I've heard them say multiple times that they try and refer patients in, and they don't get very much back… I try my best to call, to tell someone about an induction but… it's going through to an answer phone; well what do you do at that point when you've got another ambulance coming in… whenever I have tried to update the LMC it's always been received very well…* .(OB5)

Resultant stress levels rendered both midwives and obstetricians less patient, sometimes affecting communication: "*…under difficult circumstances where everyone's already a bit tired or stressed out… that's when it's often harder to get a good interface*". (MW4). MW4 discussed the impact working while in a state of extreme fatigue:

> *The bit that I… over and over find with my job is being tired. That is when… not that you make mistakes, but you don't very clearly communicate… I had a birth just recently… there was another midwife as well… because I knew I was too tired. She was doing the bulk of the work, but I went to write in the notes… and then I said 'I can't do this'… Because I couldn't string a sentence together...* . (MW4)

LMCs often worked long and unpredictable hours. At the time of interviewing there was no funding for a second midwife to assist at or take over care during labour and birth. This meant that if the LMC called a second midwife either the LMC paid a part of her birth fee to the second midwife or the second midwife worked without payment. Appreciative analysis of participants references to overwork and understaffing identified the importance of funding a second midwife to attend births to alleviate LMC fatigue, and for adequate obstetric and core midwifery staffing levels to maintain safety for mothers and babies.

5.2.6 Clarifying boundaries

Good communication was needed to ensure there was clarity of who was in charge:

> *… if I've been involved with a delivery, but it's been led by the LMC… I've just come in to perform a simple task then I think it's important… to acknowledge and recognise that that care is going back to the midwife… I guess that's where the Section 88* [Referral Guidelines] *is involved… you've been asked to come in to do something, and then you make it very clear that you're referring it back to the midwife. Not just in terms of who has responsibility but also acknowledging the work that the midwife is doing and that she's back, to leading things.* (OB5)

This comment was expressed in collegial terms and reflected an understanding of the need to negotiate and clarify roles and responsibilities. This doctor's comment identified that a solution to blurring of primary secondary interface boundaries is found in discussions to clarify responsibilities, in line with the theoretical approach of AI where participants identify pathways to improve their work environment. Communication between women, midwives and obstetricians was crucial to establish constant lines of clinical responsibility and to ensure that the woman remained central to care.

Participants' descriptions of occasions where roles and responsibilities were unclear led to examination of the role and limitations of the Referral Guidelines in clarifying blurred boundaries at the primary secondary interface.

5.3 The role and limitations of the Referral Guidelines

The Referral Guidelines have an important role in reducing blurring of boundaries at the primary secondary interface, with an extensive list of conditions for which there is recommendation to consult with or transfer care to secondary services. The current study examined the extent to which the Referral Guidelines were understood, accepted and used by midwife and obstetric participants in the study DHB.

Participants discussed their perceptions of the role and limitations of the Referral Guidelines in clarifying blurred boundaries. Three-way conversations between woman, midwife and obstetrician are advocated strongly in the Referral Guidelines and were found in this study to be the key to resolving issues due to blurred boundaries.

5.3.1 Familiarity with the Referral Guidelines

All participants were aware of the Referral Guidelines, although obstetric registrars' familiarity was limited. Study participants often incorrectly used the term 'Section 88' when discussing the Referral Guidelines. When a participant has referred incorrectly to the

Referral Guidelines as ‘Section 88’, ‘Referral Guidelines’ appears in brackets after the reference.

Midwife participants all reported regular reference to the Referral Guidelines.

> *I use them all the time… I don’t know some of them off the top of your head but they’re in the notes anyway so you can look at them and... recommend to the women that we refer and take it from there.* (MW1)

OB1 confirmed that midwives refer to guidelines in their referral letters: “*they [*LMC midwives] *say… I’m referring this woman as per Section 88* [Referral Guidelines] *because of this and this*...”. (OB1). These statements provided evidence that LMC midwives usually used the Referral Guidelines as intended.

5.3.2 Meeting the objectives of the Referral Guidelines

Study participants reported their understanding of the objectives of the Referral Guidelines. The role of the Referral Guidelines in promoting safety of both mother and baby was exemplified in this participant quote: “*… they are in place to protect mothers and babies so that the midwife or the LMC will refer in a timely manner or have a discussion about referral in a timely manner.*” (MW3)

The standardised care that should result from widespread use of the Referral Guidelines, was discussed: “*it gives us… a baseline that we’re all working on… for all of New Zealand whether they’re in Northland, Dunedin or Wellington it’s the same referral guidelines so you should be having that same advice*.” (MW1)

Participants perceived that the Referral Guidelines provided reassurance to women that midwives kept to best practice guidelines:

> *I think the guidelines are really good… I think some women are really concerned… that midwives don’t want to refer and want to keep you to normal… by showing them that you look at these… and you’re showing them why* [you’re] *doing it they understand… that we do have guidelines for our practice, that we aren’t just dreaming up ideas of what you need.* (MW4)

The above quote suggested that the Referral Guidelines gave credibility to the New Zealand midwifery profession.

The Referral Guidelines were seen to define the primary secondary interface:

> *They're giving LMCs a framework about who should be seen in a secondary, tertiary centre… keeping women safe because people who need to have more medicalised care are either involving other specialities, involving anaesthetics, involving cardiology, doing echoes* [echocardiograms], *planning labour and delivery, doing serial growth scans or raising the need for that to be done in the community by the LMCs. You would hope it would help provide a risk stratification in the community for midwives about who to keep normal and who shouldn't be normal…* (OB1)

These participants' views provided evidence that the Referral Guidelines commonly met their stated objectives, to improve safety of maternity care, promote consistent referral practices and give confidence to women, their whanau and health professionals that care would be safe, consistent and appropriate.

5.3.3 How midwives use the Referral Guidelines

Midwife participants described using Referral Guidelines for purposes in addition to their stated objectives. MW4 reported that the Referral Guidelines assisted in raising sensitive topics:

> *They're a talking point…which helps you identify things…BMI would be the perfect* [example]*… it gives you an opening to a really hard discussion. So rather than me saying… 'I think you're too fat, so I'm not happy for you to birth at* [primary birth unit] *you need to go to hospital… we need to talk about the Referral Guidelines, because of your BMI… this is what it recommends, your options, how do you feel about it'? It takes it away from your judgement and… helps you bring up a hard topic… in a less personal way.* (MW4)

The Referral Guidelines were also used as a tool to support midwife referrals, if disputed:

> *It was handy when I first started when I found there was resistance with say, sending women up to the hospital… I often had to have those* [the Referral Guidelines] *on hand so that it gave me weight and I could say no; this requires a consultation.* (MW6)

For MW6, resistance from the secondary care team to accepting midwife referrals was currently less frequent than in the past, suggesting more harmonious interprofessional relationships had become the norm over time. Appreciative analysis suggests that the

Referral Guidelines may have contributed to improved interprofessional relationships by promoting appropriate, consistent referrals.

5.3.4 How obstetricians use the Referral Guidelines

Two obstetric participants described their use of the Referral Guidelines when prioritising referrals although only one usually referred to them for this purpose: "*I do the grading with some of the other obstetricians… I don't really use them* (the Referral Guidelines) *to accept or not accept a referral… most of the time the guidelines have already been used and I'm just actioning the request…*". (OB1).

> *…we grade them with the Referral Guidelines in front of us and we follow it like a bible really…* (OB2)

Obstetric participants described use of the Referral Guidelines as a tool to give weight to medical advice when negotiating with women or midwives:

> *… usually when we say* [to women] *this is the guideline… we say we can't force you, but this is a recommendation… if the LMC disagrees with what we are doing, you…can always say this is the guideline and we think you should do this. And I think if then the LMC agrees then that would be three-way process we are all following the guideline which is still a recommendation of course… we're not forcing anyone… but we're just giving the information out there. If we do this then this is safer*. (OB3)

This statement could be interpreted as describing use of the Referral Guidelines as a tool promoting obstetric philosophy, emphasising power imbalance. It could also be interpreted as emphasising the role of the Referral Guideline as a tool to assist in building consensus and negotiating a path through potential disagreements between professionals or with women. Both these explanations may have relevance in different settings.

Some obstetric participants regarded the Referral Guidelines as predominantly a tool for LMCs' use. "*… Section 88* [Referral Guidelines] *is just a standard framework for who should be seen in clinic. I think it's more for the midwifery people to use as a referral to know who to refer rather than obstetricians use it…*". (OB 1)

In regarding the Referral Guidelines as predominantly a tool for midwives, obstetricians might minimise the importance of obstetric obligations under the Referral Guidelines. These obligations include accepting appropriate referrals, ensuring full timely feedback and engaging in three-way communication. A different view was held by one obstetrician who

acknowledged that the Referral Guidelines were also there to influence obstetrician behaviour: "*... it's there, to ensure that LMCs do their minimum duty, and also that obstetricians don't reject really important things*" (OB2).

The role of the Referral Guidelines in promoting safety and medicolegal protection was acknowledged. While believing that good care usually happened, OB4 suggested that any lapses in care quality due to midwives failing to appropriately involve secondary services would be minimised by reference to the Referral Guidelines. Following the Referral Guidelines was also seen as offering medicolegal protection to LMCs.

> *I think it's good that we've got guidelines that I guess LMCs know when they should be referring. But I think most people* [LMCs] *do that anyway… it's only really when we have people trying to look after things when they shouldn't be under the guidelines… it actually keeps the LMCs safe from any medico-legal type thing too if they've followed the guidelines.* (OB4)

It is noted that the choice of language in the above quote "…*when they* (LMCs) *should be referring*" did not acknowledge the woman's role in consent for the recommended referral. However, the focus of the research was on the relationship between midwives and obstetricians, which may have influenced language choice of participants. Power imbalance is discussed in greater detail in Section 4.2.3.

5.3.5 The Referral Guidelines and woman-centred care

The Referral Guidelines' first principle is that the woman, baby and whanau should be at the centre of care. This should remind practitioners of the purpose of maternity care, namely the wellbeing and safety of mothers and babies:

> *When a woman has an issue in her pregnancy like… she develops gestational diabetes, then I'll have a discussion with her about that referral process and how that would look… that is my recommendation that she is seen by the diabetes clinic and by an obstetrician... and then I try to give her some idea about what to expect. And, once she's agreed to that then… refer her through, to ante natal clinic.* (MW2)

The midwife showed commitment to following the Referral Guidelines while maintaining woman centred care in that she acknowledges that consent must occur before referral. Her statement "*…once she's agreed to that…*" may imply assumption that the woman would agree to referral or may be an acknowledgement of the woman's right to decline referral.

This study did not examine women's perspective on whether woman centred care was promoted by the Referral Guidelines.

5.3.6 Satisfaction with the Referral Guidelines

On being asked for any suggestions to improve the Referral Guidelines, both participant groups reported being relatively satisfied with them, recognising their important role in promoting standardised, safe care for mothers and babies: "*I think that they are clear enough in the fact that there is, obstetric and maternal health issues that …are addressed in there and that yes these are guidelines for referral… I think that is good.*" (MW2). The study found that the Referral Guidelines had a significant role in reducing blurring of boundaries at the primary secondary interface. However, participants also described instances when blurred boundaries were not resolved by the Referral Guidelines.

5.4 Limitations of the Referral Guidelines

Both participant groups referred to use of the Referral Guidelines to delineate the primary secondary interface, but participants also identified some limitations to ability of the Referral Guidelines to resolve blurring of boundaries. This identified a need to find other means to clarify blurred boundaries.

5.4.1 Every contingency is not covered

While study findings suggested participants regarded the Referral Guidelines as usually promoting safe care, some participants reported that they believed there should be flexibility in interpretation of the Referral Guidelines. OB 2 stated that the referral guidelines do not cover every contingency:

> *All patients don't fit to guidelines … one of the concerns I have is about antenatal patients that have multiple risk factors that perhaps don't fit each criterion… does the patient fit the guideline for an induction? No, she doesn't… but there's two or three risk factors that together give us a picture that we would like* [to induce]*. And I guess that's the difficulty with the guidelines… I think they do a fairly good job of keeping mother and baby safe, but I don't think they give a 360-degree view … .* (OB2)

This emphasises the importance of individualised care taking in to account multiple risk factors.

MW5 recognised that the Referral Guidelines had an important role in guiding practice, but believed that they could be interpreted flexibly, especially by experienced midwives:

> *I would imagine that… the earlier you are in your career, the more… literally that you will translate them. You're look at them more as a protocol than a guideline. Because that's what they are… They're best practice guidelines…not commandments.* (MW5)

This statement was correct in that since the Referral Guidelines were separated from the Section 88 document in 2007, following the Referral Guidelines is not a legal requirement. In practice, most participants were unaware of the separation, so the separation may have had no effect on the way participants used the Referral Guidelines. These two statements recognised that the Referral Guidelines do not remove the need for individualised clinical judgement.

5.4.2 Timeliness of referral and feedback to midwives

Participants recognised that it was important that referrals for women with conditions outside the scope of primary midwifery care received recommendation for referral in a timely manner. Some participants wanted the Referral Guidelines to provide guidance relating to timing of referral: "*It* [the Referral Guidelines] *should provide guidance to community midwives as to when should be the appropriate time to refer*...". (OB5)

> *They're very good at giving us those guidelines for referral… there could be some clarity around timeliness…* (MW2)

The Referral Guidelines state that timeliness of referral depends on multiple factors, so cannot be addressed by a one-size-fits-all guideline. Thus, timeliness of midwifery referrals must be a clinical judgement. The Referral Guidelines specify that obstetricians should inform LMC midwives of outcomes of referrals fully and in a timely manner (MoH, 2012). Participants reported that feedback letters to LMCs from secondary care was often untimely, sometimes rendering them ineffective as feedback:

> *… one memorable instance we had a woman who had low platelets and was seeing* [a haematologist]*… she* [the doctor] *wanted us to do weekly bloods… the way that she communicated… was by sending a letter which we didn't get until a month later... four weeks later, the doctor's ringing saying why haven't you done this? Well because you haven't told us that we need to do this… .* (MW2)

Timeliness of reply to referrals is required by the Referral Guidelines, but not defined. This statement identifies a need to improve timeliness of communication from obstetrician to LMC. This is addressed in greater detail in Chapter 6.

5.4.3 Misconceptions and inadequate information.

There were some errors in perception of specific points in the Referral Guidelines from both participant groups. Occasionally the midwife had inadequate information to know if referral was recommended. For example, there is a recommendation that a history of large loop excision of the cervical transformation zone (LLETZ) diathermy to a depth greater than 16mm requires consultation, information that a participant midwife stated was not readily available to the LMC midwife or known to the woman. It was unclear whether this was a local or nationwide issue. This could result in some women receiving unnecessary referrals and investigations. In one setting a midwife participant addressed this by giving the woman the option of scans for cervical length in the community rather than recommending referral without having this information:

> *There's a referral* [criterion] *if there's* [a history of] *LLETZ loop diathermy to a depth of a certain amount… we are probably referring a lot of women… who don't need to be referred because nobody has bothered to write anywhere that we can access* [the woman's medical history], *that says what depth* [her diathermy was]... *we have had conversations around that with some women, because often in early pregnancy… they* [women] *don't want to sit for three hours to be told everything's fine. So, a lot of women are actually choosing to have scans in the community for cervical length* [ordered by the LMC midwife]. (MW5)

This was an example of an LMC midwife offering investigation of a condition that came under the secondary care umbrella. The Referral Guidelines criterion for recommending consultation was overridden following discussion with the woman, but the appropriate investigation occurred, and referral to secondary obstetric services occurred only if an abnormality was detected on ultrasound scan. It could be argued that the midwife practised outside her scope. However, the action kept the woman safe, gave her choice and relieved pressure on stressed secondary care services. Appreciative analysis determines that in this instance, flexible application of the Referral Guidelines offered more options to women while maintaining safe care.

IVF (in vitro fertilisation) pregnancy is not listed as a referral criterion in the Referral Guidelines, but there was confusion amongst participants about whether referral should be recommended for women with IVF pregnancies. Participants reported variable perceptions of this clinical scenario, with some practitioners unclear or incorrect in their understanding of IVF as a criterion:

> *... the women* [who have undergone IVF] *get letters from* [private fertility service] *saying that they're going to be followed through their pregnancy by the obstetricians yet that's not a referral guideline... we then we put a referral through because the woman wants us to and then the* [public hospital] *obstetricians say, 'we don't want to see you!'.* (MW2)

> *...for example, IVF pregnancies...the guideline says they have to be referred to us...* (OB3)

MW2 correctly identified that IVF was not included in the Referral Guidelines, while OB3 incorrectly perceived IVF pregnancy was included in referral criteria.

OB1 reported occasionally receiving what she perceived as unnecessary referrals:

> *Someone that has a history of hypertension but there's no obvious issues with blood pressure... an LGA* [large for gestational age] *baby and normal GTT* [glucose tolerance test, a definitive test for gestational diabetes]*... I'm not quite sure sometimes why they write a referral. It's not often but it does happen.* (OB1)

The referral criteria for consultation during pregnancy regarding pre-existing hypertension is a blood pressure greater than 140/90 mmHg or a woman on antihypertensive medications. For an LGA baby the referral criterion is a baby whose weight is greater than the 90th centile on a customised growth chart. Clinical criteria were not mentioned, so misperceptions could be either that of the LMC midwife or the obstetrician in these instances. Consequently, unnecessary referrals may be sent, or referrals meeting Referral Guidelines criteria could be declined. Reference to the Referral Guidelines by LMC and obstetrician would clarify this. It is not reasonable that practitioners should be expected to memorise the Referral Guidelines. Appreciative analysis determines that by consulting the Referral Guidelines, midwives and obstetricians can reduce blurring of primary secondary interface boundaries in some instances.

5.4.4 Capacity of secondary care services to meet some guidelines

Both participant groups discussed lack of resources reducing the ability of secondary care services to meet all recommendations of the Referral Guidelines. MW5 reported that in the study DHB, referrals meeting the criterion for recommendation for consultation when BMI is greater than or equal to 35 but less than 40 could not be catered for:

> *If we actually referred every woman who met the BMI criteria, there'd never be a space in antenatal clinic… if a woman's 6-foot-tall and she's technically at an increased BMI but she's actually really athletic build, compared to somebody who is very short in height, very overweight and unfit… you have to use common sense.* (MW5)

Participants commonly reported understaffing as a problem leading to limited ability to see some woman who may have met Referral Guidelines criteria for referral:

> *We're always struggling for antenatal clinic space… last year less than 10% of antenatal clinics had a registrar which means, that's almost half as many patients couldn't be seen in an antenatal clinic… if there was any ability for the LMC to do community ultra sounds and refer back if concerned rather than come* [to secondary care clinic]*... the guideline was being followed to try and rein in all the referrals... .* (OB2)

These two quotes demonstrate how adequate resources are needed to enable appropriate application of the Referral Guidelines. Adequate obstetric staff numbers would alleviate primary secondary interface stress, improving the capacity for the obstetric department to manage the volume of secondary care referrals.

5.4.5 Outdated guidelines

The Referral Guidelines were overdue for revision at the time of interviewing participants. This raised the possibility that some may no longer be applicable: "*... I believe that the Referral Guidelines need reviewing because there's many guidelines that the obstetric teams don't necessarily see a woman for which we're doing the referral process and actually… do they need reviewing?*" (MW3). This midwife was correct in that the Referral Guidelines were due for revision in 2016 and she was interviewed in mid-2017.

5.5 Summary

Blurring of primary secondary interface boundaries occurred due to differing philosophies, differing interpretation of guidelines, misunderstandings about and limitations to the

Referral Guidelines, untimely communications after consultation, and omitted or flawed three-way communication. Historical provision of secondary care by LMC midwives appeared to be becoming less common. This change contributed to blurring of boundaries. Some tension between LMCs and the secondary care team was reported due to blurring of boundaries between primary and secondary care. Participants reported that increased core midwifery and obstetric staff resourcing would improve capacity of the DHB to meet its obligations in provision of secondary maternity care and reduce tensions due to negotiation over responsibility for secondary care in labour.

Using the lens of AI identified that Referral Guidelines had a significant positive role in clarifying blurred boundaries at the primary secondary interface. Participants reported that the Referral Guidelines usually meet their stated objectives and were also seen as providing medicolegal protection to LMCs. In addition to intended uses, participants used the Referral Guidelines to raise sensitive topics, and to give weight to recommendations and referrals for women and for each other, particularly when disagreements about appropriateness of recommendations or referrals arose. Obstetric familiarity with the Referral Guidelines was variable, with obstetricians having greater familiarity than registrars. Good obstetric understanding of the Referral Guidelines by obstetric participants could improve understanding of midwives' reasons for referral and promote meeting of obstetric obligations for timely feedback and ensuring three-way communication.

The Referral Guidelines helped define boundaries, but the list of conditions where referral was recommended did not always clarify primary secondary interface boundaries. Thus, the list of conditions provided an adjunct to, not a substitute for clinical judgement, communication, teamwork and respectful negotiation.

Midwife participants reported greater satisfaction with interactions with obstetric staff when communication occurred in a manner allowing them to negotiate decisions relating to women's care. When blurring of boundaries occurred, effective interprofessional communication keeping the woman at the centre of care was needed. Analysis of participant's observations on primary secondary interface boundary issues, using AI, identified that three-way conversations, as advocated for by the Referral Guidelines, were the key to clarifying blurred boundaries. Participants reported that when three-way conversations occurred effectively, clarification of responsibilities usually occurred. As there were occasions reported when the three-way process was flawed or omitted, a need to better understand the three-way process and how to promote this, was identified. In Chapter

6, participants' experiences of three-way communication, and suggestions to promote this are addressed.

Chapter 6. Facilitating three-way conversations

6.1 Introduction

The third theme identified from data analysis was the vital importance of three-way communication between woman, midwife and obstetrician to facilitate satisfactory interprofessional relationships and safe, woman-centred maternity care. Three-way communication between woman, midwife and obstetrician is a requirement of the Referral Guidelines when consultation or transfer of maternity care occurs at the primary secondary interface (MoH, 2012). The recommendation for three-way conversations in the Referral Guidelines should serve to remind all that the wellbeing and safety of women and babies is the purpose of the interactions between LMC midwives and obstetricians, and that woman-centred care should be central to all primary secondary interactions.

In Chapters 4 and 5, the first two themes identified from this research study, the need to negotiate philosophical difference between midwives and obstetricians, and the need to clarify blurred boundaries at the primary secondary interface, were discussed. Three-way conversations were found to be the key to negotiating differing philosophies and clarifying blurred boundaries. Midwives and obstetricians agreed that when a three-way conversation occurred successfully, optimal communication was usually facilitated, but participants identified situations when three-way conversations were not occurring or were suboptimal. This finding identified a need to understand barriers to three-way communication and find ways to overcome these barriers.

This chapter describes methods of communication by which three-way conversations occurred in the study DHB, situations where three-way communication already worked well, and barriers to three-way communication. AI was applied to identify factors currently facilitating three-way communication, and participants' recommendations on how three-way communication could be promoted in relation to consultation and handover of clinical responsibility.

6.2 Methods of communication

Participants described different ways in which three-way conversations occurred, in answer to the research question 'How do midwives and obstetricians communicate at the primary secondary interface?'

1. Direct verbal communication
2. Through intermediaries

3. Written

6.2.1 Verbal communication

In delivery suite and WAU when the LMC midwife was present, conversations usually occurred face-to-face, and sometimes by phone. Opportunistic corridor consultations occurred intermittently between LMC midwives and obstetricians.

> *sometimes we get bowled up to in delivery suite about a patient that's not even in delivery suite, but a midwife happens to see you and wants to ask a question.* (OB4)

Midwives sometimes phoned obstetricians from the community, and less commonly, obstetricians/registrars phoned midwives from clinic or WAU, if decisions needed immediate discussion. Very occasionally, LMC midwives attended secondary care clinic with women in their caseload.

Both midwives and obstetricians reported usually positive face to face or phone interactions. In most birthing situations, participants reported good three-way communication because all participants were present: "*I think most of the time all of us communicate pretty well…*" (OB4).

> *…when everybody's in the same room then actually that works very well, and I find that the vast majority of obstetricians are respectful and communicate reasonably well in that three-way process.* (MW2)

Participants perceived phone conversations as usually satisfactory. Midwives particularly appreciated receiving phone calls from obstetricians because they could discuss and resolve issues relating to women's care. Situations where effective collaboration was facilitated by verbal communication were described:

> *I wrote in the referral… what I thought would need to happen and that she didn't necessarily need to be seen by the team… I got a phone call from the consultant… we'll sort this out in the community, and you follow up this… that physical phone call from that health professional was great.* (MW3)

This communication scenario demonstrated how direct communication from obstetrician to midwife clarified roles and responsibilities for the LMC and the obstetric team. OB3 described another scenario where phone communication facilitated positive collaboration:

> *… I had an LMC who rang in and said, 'I'm not convinced with this diagnosis and this patient should be seen because of these additional factors. I spoke to another registrar yesterday and things had changed today'… that patient actually needed admission and a* [caesarean] *section… the information which I needed was clear cut like, 'what has changed from the last time?'… all the communication which she had from the previous registrar might have been a different situation… that's why the registrar said, 'that's fine'. But I think that LMC had a good communication between her client and the registrar even if the registrars have changed, to tell the registrar what has changed….* (OB3)

This scenario demonstrated timely collegial communication facilitating appropriate change to clinical management in response to a developing clinical issue. It illustrated the crucial follow-up role LMCs had for women after obstetric consultation.

6.2.2 LMC attendance in secondary care clinic

Obstetric participants reported that LMC midwives occasionally attended secondary care clinic with women and that LMC attendance facilitated constructive three-way conversations but was very time inefficient for LMCs: "*…very occasionally, I've had a LMC come to an antenatal consultation*". (OB2)

> *Do you know what was good? When midwives used to come to clinic with the patients and spend the whole afternoon waiting to be seen!... I know that's not good use of their time… when the LMC knew potentially that the patient was going to be maybe induced or that there was difficulty that they'd come… as their woman's advocate… but it wasn't like them and us.* (OB4)

OB4's statement suggested that LMC attendance in antenatal clinic had been commonplace in the past but had now become a rare event in the study DHB.

6.2.3 Alternatives to LMC attendance in secondary care clinic

There were many situations where it was impractical for LMC midwives to attend obstetric consultations, identifying a need to facilitate three-way communication by other means. Direct phone communications from obstetricians in secondary care clinic or WAU were ideal for midwife participants:

> *… if a woman is being booked in for an induction, I would really like someone to ring... to be consulted* [about] *how my schedule is sitting… so that I don't have to… rearrange my whole clinic just because it suits the hospital.* (MW6)

OB5 understood the effectiveness of phone communication, showing commitment to involving LMCs in decisions about women's care, while stating that there were times when she did not call:

> *When we're in WAU I call LMCs… for example if I'm booking an induction I always try and call them myself… or if there's something we want the LMC to do… then I try and call them and update them. But every patient we see in WAU obviously we don't contact the LMC for those patients, the* [core] *midwives tend to contact them directly… .* (OB5)

This doctor was willing to communicate with LMCs, but acuity could be a barrier to phone communication.

Midwife participants described preparing women for secondary care appointments, with information such as what to expect, what questions to ask, and LMC availability for induction of labour:

> [I] *try and talk to a woman before she goes, that this is likely what will happen... They* [the obstetrician] *will look at all your dates and your scans and they will probably plot them* [on a Grow Chart] *to make sure things are okay… They may run a scanner over it* [your abdomen]*... so they* [women] *know what to expect... .* (MW5)

MW5's strategy aimed to empower women to be able to facilitate their own negotiations.

MW1 reported facilitating three-way conversations by phone, advising women to request the obstetrician phone the LMC during their consultations with potential to use speaker phone technology to facilitate three-way conversations:

> *I said look if you feel pressured then get them* [the obstetrician] *to ring me… you've made a good decision. You've made it* [based] *on informed consent... if you feel pressured or you feel as though you're having to argue your point then you ring us because that's our job.* (MW1)

Three-way communication facilitated by phone technology was relatively time efficient for the LMC and used a readily available IT solution.

6.2.4 Structured communication tools

During the time the study took place, participants reported that the study DHB policy recommended use of the communication tool SBARR at handover of care. Participants discussed using SBARR to give structure to communications between LMC midwives and the obstetric team, seeing SBARR use as promoting improved content and clarity of communication: "*Using that SBARR tool is very good so that information that I share with them is concise, objective, and very clear.*" (MW6). In delivery suite and WAU there were SBARR stickers for inclusion in women's clinical records at handover of care. A multidisciplinary panel developed the SBARR stickers, demonstrating that introduction of this tool was collaborative: "*I've been on an interface committee… It was the group that came up with the sticker that goes in the notes now when you hand over care… the SBARR* sticker…". (MW4)

OB3 described a scenario where appropriate use of SBARR led to rapid decision making: "*…she* [the LMC] *covered everything on the SBARR… situation, background, assessment… and what does she think we should do and what is our recommendation… that was in a very concise way... the decision was made within 3 minutes.*" (OB3)

The current study gave no information on how widespread use of SBARR was in the study DHB, but findings suggested that SBARR was an effective communication tool.

6.3 Intermediaries in communication

Participants identified that verbal communication between LMCs and obstetricians was often indirect, using a core midwife as an intermediary. Two common intermediary roles were identified.

1. ACMM: the shift coordinator of delivery suite
2. Core midwives: In WAU or sometimes in secondary care clinic

6.3.1 ACMMs as intermediaries

The usual policy in the study DHB to admit a labouring woman or request review in WAU was for LMC midwives to phone the ACMM rather than a member of the obstetric team. Both LMC and obstetric participants reported they were usually satisfied with ACMMs acting as intermediaries. LMC participants saw this arrangement as an improvement on past practice when an obstetric registrar was the first point of call but was often unavailable:

> *I do really like the fact that now… we have that one contact with the delivery suite coordinator… because for many years it was very difficult to talk to a registrar… there's a clear person to go to… it used to be that when you got there… you'd spend a lot of time trying to find people.* (MW4)

> *Sometimes they* [LMCs] *will just go through the ACMM… and give them the information and then they* [the ACMMs] *relay that back to us... Normally that works well because the ACMM is able to get most of the information that they need.* (OB5)

The ACMM may feed back to LMCs following discussion with the obstetric registrar:

> *… the ACMMs are doing a really good job as being… the middle person. And sometimes if I've got a question… and the obstetrician's busy, the ACMM will write it all down and she'll wait 'til the obstetrician's free, talk to them and then ring me back….* (MW8)

The LMC could usually call the on call the obstetric registrar or obstetrician if she decided she needed direct communication:

> *… the patients that go through the ACMM rather than us are the ones that the LMC knows needs to come in... The ones* [phone calls] *we get tend to be where there's a question and 'do they need to come in today… or is there any other advice that we would give?* (OB5)

The ACMM dealt with straightforward calls. If further negotiation was needed, there was a defined pathway for the LMC to phone the on call obstetric registrar. Although there could be delay for LMCs contacting registrars, the ACMM reduced the volume of calls to the registrar, potentially freeing up time for the registrar to respond to LMCs when they did make direct contact. ACMMs usually documented phone communications and filed their documentation in women's clinical records. For admissions, key points were noted on a large computer screen in delivery suite and WAU offices which did not have public accessibility. In contrast, phone conversations between LMC midwives and obstetricians or registrars were not usually documented by the doctor. LMCs were not asked about their documentation practices in phone consultations.

> *… the problem with ringing a consultant directly… it's not really documented anywhere* [in the DHBs record] *because they* [obstetricians] *don't have access to the notes... whereas at least by getting to a central*

person [ACMM]*... they will write down what you are saying. It will then get filed in that particular woman's notes. It's not written on a back of an envelope and stuffed into somebody's handbag... .* (MW5)

...the barrier... will be, no documentation of the conversations. We just rely on 'somebody has said this'... I've heard from very experienced midwives who always tell me 'document, verbal communication is not considered as a legal communication'... there should be some level of documentation which is proven from each side. I don't know how we do that. (OB3)

These two statements identified potential reduction in information loss when phone communication was with an ACMM compared to when it was with the obstetric team. This suggested the ACMM's intermediary role potentially improved safety for mothers and babies through more consistent documentation of communications. A need for doctors to have a means of documenting their phone conversations with LMC midwives was identified.

6.3.2 Core midwife intermediaries

Participants reported that in WAU, no written communication was sent to LMC midwives after consultation. Instead, core midwives often phoned or texted to inform LMC midwives of outcomes of obstetric consultation, providing information such as timing of induction of labour, secondary care follow-up plan, or to requested follow-up by the LMC. Core midwives usually read information from the obstetrician's handwritten documentation. This was the commonest mode of communication from WAU and sometimes occurred in secondary care clinic.

From an AI perspective, core midwives' intermediary roles filled an important gap in communication. Communication gaps were due to delayed receipt of letters from antenatal clinic and lack of direct communication from doctors to LMC midwives in WAU. While the intermediary role improved communication through information transfer, participants identified flaws in the process.

... the communication is not the best in WAU and we're looking at ways to improve on that... we had talked about actually photocopying the notes and just sending that out to the midwives, but we... haven't done that either. (OB4)

Verbal communications delivered by core midwives commonly contained non-negotiable information. Core midwives sometimes lacked key information, such as the indication for

induction, despite availability of standardised induction sheets for doctors to complete. Core midwives often called LMCs hours after the consultation, so the doctor who made the clinical decision was commonly no longer present. This left no straightforward pathway for LMCs to discuss decisions with doctors:

> *The three-way process when a decision's been made about how to birth the woman is poor… because the LMC's usually left out of that three-way conversation. She's usually informed of the outcome of the two-way conversation… usually* [by] *someone who wasn't even involved in the two-way conversation!* (MW4)

> *The three-way process is not always optimally facilitated especially if a woman comes to clinic without a midwife and the clinic is overbooked and you give your recommendation and then the clinic midwives are having that conversation with the* [LMC] *midwife.* (OB1)

Information loss was reported commonly by LMC participants when core midwives acted as intermediaries. MW4 described a scenario when use of an intermediary resulted in an unsatisfactory communication resulting in a requirement for a second consultation:

> *… a woman who rung me in tears because she'd been up for her routine appointment and was told she was being induced the following week… and didn't understand why that was happening… they* [a core midwife] *did ring later that day… I said, 'so why's she being induced?' And no one could tell me… if they* [the doctor] *had phoned me as part of the three-way conversation, I could have told them… I don't think she wanted to be induced… they would have been able to… address that with her… more work in the long run because then I had to phone back and… she had to go up for another visit...* (MW4)

In this instance two communication barriers were incomplete information and lack of ability to negotiate. A timely phone call during initial consultation could have avoided the woman's distress and reduced subsequent workload for the LMC and the obstetric team. Furthermore, when situations arose where the woman was unhappy with obstetric decisions, or if referrals were lost or afforded insufficient urgency, a need for a straightforward pathway for LMCs to resolve these issues was identified. Midwives described frustration in addressing issues when they realised women may not have received appointments:

> *... when I ring, to chase up… it's very difficult, to get someone to talk to… sometimes it can take an hour… or I have to leave a message on an answer phone. Sometimes they won't get back to me… it's about me being persistent...* (MW6)

A framework of AI identifies that communication would improve if there were designated pathways for LMCs to address breakdowns in communication and resolve conflict. Midwife participants described an ideal where the obstetrician phoned the midwife if there was any likelihood of controversy over a decision, or if the LMC would be involved in follow-up care:

> *... if there's immediate follow up then of course that needs to be a phone call... I understand that they're under stress but actually if there's urgent stuff that needs to be done it needs to be communicated.* (MW2)

The core midwife role as an intermediary was not invariably unsatisfactory. MW6 reported a scenario when communication from a core midwife intermediary worked well:

> *I've had one three-way conversation this year. I had the antenatal midwife ring me to ask did I agree with the date that a woman was going to be booked for an induction. And that would be the one of the first times I've ever had a three-way and that was when she was there with the woman as well.* (MW6)

Because she was able to negotiate with the core midwife, the LMC perceived this to be a three-way conversation despite absence of the doctor who had recommended induction of labour. AI was applied to identify that the core midwife's role in delivering information was important, and the role was enhanced when she was also empowered to negotiate decisions with the LMC.

6.4 Written communication

The primary mode of communication between LMC midwives and obstetricians when women attended secondary care clinic was by referral letter with written reply. LMC midwives faxed letters to secondary care clinic and obstetricians dictated replies, which were typed in the DHB typing pool, proofread, then posted to the LMC.

6.4.1 Communication content

Midwives were usually satisfied with content of written communications. MW4 discussed her optimum response to a written referral to the obstetric team:

> *… it's getting response to the items you've addressed in your referral… what would be good is if you said what she wants and maybe some of her… concerns or worries and that those things have been discussed and addressed* [by the obstetrician] *and that when you get the* [written] *reply they've been responded to. What would be frustrating is when you've brought up issues* [in the referral letter] *and the woman will report to you that they weren't discussed…* (MW4)

Optimal letters from the obstetric team addressed issues raised by LMCs in their referral letters.

Obstetricians were usually satisfied with the content of written communication from LMCs but considered some midwifery letters lacked structure and clarity or were over-long.

> *Most of the time, … written referrals are appropriate*. (OB1)

> *I think sometimes people just regurgitate a whole lot of information without any structure….* (OB1)

Obstetric participants' perception of optimal referrals was a succinct letter, stating the problem, giving brief background including relevant social history or specific requirements for the woman referred, and a means of communication back to the LMC. They liked the LMC to state times of availability for induction of labour:

> *… for me a clear problem list… a good background history of their previous obstetric and medical complications… And how to communicate back with them so it's useful if they have a phone number in their referral so I can call them if I don't really understand what the problem is… .* (OB1)

> *I really rely on the LMC having much more insight on that patient's ability to take away the information from obstetric consultation…* (OB2)

These two quotes described the LMC's role in mediating communication between obstetrician and woman.

OB2 described a situation where detailed background information from the LMC facilitated communication:

> *I had a lady with GDM* [Gestational diabetes mellitus] *on diet... The LMC had referred and said, 'this is a patient who's paying to have skype consults with dieticians in America and she is walking two hours a day… because she doesn't want to go on treatment'. And it gave me… insight into how over seriously this lady was taking things almost into the detriment; in fact this baby became growth restricted… the LMC had done a really good job of explaining how strongly she was doing this… we had a real light bulb moment… actually my main concern about her delivering at home was nothing to do with her labouring and birth, but… the blood sugars of the baby… she had a bit of a phobia about hospitals… I was able to arrange for her to have a tour of the birthing unit... and they worked out an approach so that she could actually have a very home like physiological labour.* (OB2)

While communication was not immediate, good written communication from the LMC facilitated a three-way process in this not urgent scenario, allowing the obstetrician to effectively address the concerns of the woman and reach a decision acceptable to the woman, the obstetrician and probably the LMC.

6.4.2 Timeliness and dated technology

Although letter content from the obstetric team was usually perceived as good, participants reported issues such as lost referrals, delayed acknowledgement of receipt of referrals, and late arrival of letters from secondary care clinics. Dated technology, such as faxes, typing pools and posted letters, caused many of these issues:

> *I find the letters from ante natal clinic are really detailed but often very delayed… sometimes you're getting a plan around the birth and they've actually already birthed…* (MW1)

> *I don't think letters are the best way of communicating because I've had women who have delivered, and the LMC's got the letter three weeks after they had delivered...* (OB3)

MW5 reported instances where important information was received too late for timely intervention:

> *… getting a letter 3 weeks later saying I want you to check her blood pressure tomorrow is not helpful.* (MW5)

Increasing numbers of LMCs had remotely accessible electronic record keeping systems, but these could not interface with the current DHB system, which needed an upgrade if shared electronic records were to be contemplated. Anecdotally, use of information technology (IT) was more advanced in some other New Zealand DHBs. Participants advocated for upgraded technology such as email and electronic record sharing. Participants also suggested teleconference, videoconference or skype to augment communication by letter. A requirement for data security was raised. Technology upgrades could improve efficiency and safety of the maternity system: *"… if I could access the woman's visit record, then I could probably answer half my own questions without having to bother them".* (MW4)

Two new DHB initiatives were discussed by midwife participants; text communication by core midwives to communicate decisions for women seen by the obstetric team acutely in WAU and proposed provision of tablets to all LMC midwives allowing secure access to some DHB records.:

> *I've received two* [texts] *so far… The first one was… such and such had a scan, all was well… discharged back to LMC care, however doctors would like GTT and HbA1C. So clearly there was an issue with the scan but… I haven't actually received the scan report… clearly there was a little issue with that case…* [there] *should have been* [a] *little bit more information in that text.* (MW3)

Text messaging facilitated timely communication when a doctor could not phone and an LMC was unavailable by phone, but information loss remained problematic and text did not enhance three-way communication as there was no pathway to negotiate.

Introduction of computer tablets for LMCs was regarded positively by LMCs: *'… we're still using fax machines which is so archaic…with the new tablets coming, I still haven't got mine but… I'm really excited about being able to just get lab results and things like that'.* (MW8) Tablets would address security for the DHB computer network, improve LMC access to letters, scan and laboratory results, and raised the possibility of more extensive record sharing. The initiatives by the study DHB and adoption of remotely accessible record keeping by LMCs showed commitment on both sides to improved communication systems. The study identified a need to develop these systems further and find new IT solutions to ensure timely communications.

6.5 Three-way communication: Summary

The study identified that LMC midwives and obstetricians communicated verbally in face-to-face and phone conversations, via intermediaries, and by letter. Verbal communication usually functioned well, facilitating three-way communication. The content of written communications between LMC midwives and obstetricians was usually perceived as satisfactory. However, use of dated technology caused significantly delayed replies and some referral loss. There was an identified need to upgrade IT systems to enable shared record keeping and to use email rather than fax and post for interprofessional letters. Initiatives beginning to address dated technology were LMCs adoption of remotely accessible record keeping systems and planned provision of tablets for LMCs by the DHB.

Intermediary midwives were commonly used in communication between LMC midwives and obstetricians, filling communication gaps when obstetricians were unavailable to speak to LMCs personally. Intermediaries could facilitate or impede three-way communication. Where the intermediary was empowered to negotiate with the LMC, and the LMC had the default option of calling the doctor, this usually facilitated communication. Where the intermediary acted as a messenger, with no power to negotiate, she relayed information, but three-way communication was omitted, and there was often no option for LMCs to speak to doctors directly.

Several factors facilitated three-way communication. Verbal communication was improved using the structured communication tool SBARR. LMC midwives empowered women by preparing them with what to expect and what to ask in clinic or WAU if the LMC was not present. Some LMC midwives used current smart phone technology to teleconference into consultations.

Three-way conversation was identified in the previous two chapters as pivotal in addressing blurred boundaries at the primary secondary interface and negotiating philosophical difference. A significant number of factors promoting three-way conversations were in place already, and adoption of suggestions for improvement is advocated to promote safe, women centred care. In Chapter 7 the lens of AI is used to analyse findings and make recommendations to optimise collaboration between midwives and obstetricians.

Chapter 7. Discussion

7.1 Introduction

This research set out to describe how New Zealand LMC midwives and obstetricians communicate at the primary secondary interface. Aims were to describe how communication between LMC midwives and obstetricians happens at the primary secondary interface in New Zealand, with emphasis on what comprises positive communication and how to promote this, and to describe the understanding and use of the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) (MoH, 2012) by New Zealand primary care midwives and obstetricians in their communications with each other in practice.

This chapter discusses the three major themes emerging from this study:

1. The need for midwives and obstetricians to negotiate philosophical difference
2. The need to clarify blurred boundaries at the primary secondary interface
3. The vital role of three-way conversations between woman, midwife and obstetrician.

The ways in which the three themes interweave is described. The findings of this study are compared with New Zealand and overseas literature. Those aspects of the relationship between obstetricians and LMC midwives currently working well and the barriers to interprofessional relationships are analysed. In keeping with the approach of AI, means of overcoming barriers and supporting collaborative practice between midwives and obstetricians are sought in interpretation of participant responses. Strengths and limitations of the study are explored. Recommendations for practice and further research are proposed.

7.2 Negotiating philosophical difference

While positive interprofessional relationships between midwives and obstetricians were found in the current study, both participant groups also reported that sometimes philosophical difference posed a barrier to interprofessional collaboration. This identified a need to negotiate a pathway through philosophical differences that respected the views of women, midwives and obstetricians.

The finding of philosophical difference in the current study aligned with findings in the literature, describing philosophical difference between midwives and obstetricians as a potential impediment to communication between the two professional groups and contributing to different beliefs about what comprised optimal care (Downe et al., 2010;

Guilliland & Pairman, 2010; Matthias, 2010; Ratti et al., 2014; Warmelink et al., 2017; Watson et al., 2016). The current study finding of usually positive relationships between midwives and obstetricians in the study DHB led to analysis of what features promoted coexistence of positive relationships and philosophical difference, consistent with the approach of AI.

7.2.1 Influence of the professional bodies

Both participant groups expressed their beliefs that midwives favoured a less interventionist approach than obstetricians. NZCOM and RANZCOG influence professional culture through their differing philosophies or visions for practice. Participants' perceptions of philosophical differences were compared with the philosophical standpoints of the respective professional bodies. NZCOM's primary focus is on woman-centred care (NZCOM, 2105). Participant midwives reflected NZCOM's philosophy, focusing on providing information to empower women's decision making, rather than specifically favouring non-intervention. RANZCOG places greater emphasis on delivery of excellent care (RANZCOG, 2018). Obstetric participants expressed preference for ensuring women accepted their recommendations for intervention as the safest option, aligning with RANZCOG's more practitioner-centred focus.

7.2.2 Power differential

The literature identified that power differential could lead to dominance of medical philosophy over midwifery philosophy. Power differential could impede interprofessional communication, limit the ability of the LMC midwife in advocating for the woman and therefore changing clinical outcomes. (Behruzi et al., 2017; Downe et al., 2010; Mathias, 2016; Ratti et al., 2014; Warmelink et al., 2017). In the current study, some midwife participants described interprofessional power differentials favouring medical philosophy, an issue also identified by an obstetric participant. A finding of different language use between midwife and obstetric participants could be said to reinforce or minimise power imbalance between health professional and woman. The most obvious example was that midwives commonly spoke of *'women'* and obstetricians usually referred to *'patients'*. In New Zealand's public maternity system, LMC midwives usually have sole responsibility in uncomplicated pregnancies. They may provide maternity care in collaboration with obstetricians after referral to secondary care. In contrast, publicly funded obstetric practice predominantly focuses on identifying and treating the abnormal. The different, albeit overlapping scopes of practice could influence differential word choice, the term 'patient' denoting unwellness. However, Silverton (2017) described the term 'patient' as carrying

connotations of passivity and compliance. Silverton observed doctors to usually referred to ‘patients’ while midwives more commonly spoke of ‘women’ or ‘mothers’, perceived as more equalising terms, and echoed by current study participants. Such findings reveal the power of language to reflect and reinforce different belief systems.

In day-to-day interactions, power imbalance was hardly noticed by participants, possibly because power imbalance was minor, or alternatively, because it was normalised. However, critical management decisions were often made by obstetricians without involving the LMC. Omission of three-way communication in decisions led to frustration and disempowerment for LMCs and sometimes dissatisfaction for women. This omission was not universal; some obstetric participants reported making efforts to phone LMCs to negotiate decisions, thereby reducing power differential and increasing satisfaction for midwives and women. Midwife participants acknowledged and appreciated such instances when obstetricians engaged in effective three-way communication, as this led to more satisfactory negotiation of women’s issues and acknowledged the LMCs role. Three-way communication was identified as the key to reduced power differential when women, midwives and obstetricians had equal opportunity to contribute their views.

Both professional groups recognised that philosophical standpoints not aligning with midwifery or obstetric beliefs could lead to conflict, and that alternative positions may be driven by women, rather than midwives or obstetricians. When women chose alternative care pathways that opposed obstetric values, midwife participants sometimes felt subjected to criticism, demonstrating a defensive position as the non-dominant professional group. Conversely, obstetric participants’ reaction to alternative wishes of women was to express concern regarding safety, aligning with medical philosophy. An obstetric participant referred to risk of complaint against clinicians when care was declined and medico-legal risk to midwives which was mitigated by following the Referral Guidelines. Anxiety that adverse outcomes might occur, leading to complaint, promoted a medicalised philosophy and reluctance to negotiate women’s alternative wishes. This anxiety could affect midwives as well as obstetricians. Overseas, fear of litigation is documented in the literature as a motivator for health care professionals (Hindley & Thomson, 2007). While litigation is rare in New Zealand, fear of complaint and professional censure is reinforced, as the Health and Disability commissioner has criticised midwives who have not followed specific Referral Guidelines (HDC, 2019a, 2019b). Judgement on decisions made by an individual health practitioner should be based on the norms of the profession from which the health care practitioner comes. Obstetricians are likely to be critiqued based on obstetric rather than

midwifery values, so may fear censure if they cede to a midwifery viewpoint. However, power imbalance means that midwives may also be judged using obstetric values, further promoting a medical philosophy, as has been reflected in some HDC findings where obstetric critique of a midwife's practice is sometimes given greater credence than midwifery critique (HDC, 2019).

Despite philosophical difference, power imbalance and fear of complaint, the current study revealed scenarios where alternative philosophies were successfully negotiated. For example, a woman chose a vaginal breech labour without continuous CTG monitoring and with obstetric involvement in the second stage of labour only. Every component of the labour was discussed between the woman, the LMC, and the obstetrician. Discussions and decisions were documented, recognising the pathway recommended in the Referral Guidelines, should a woman decline care (MoH, 2012). The LMC and the obstetricians understood their roles. The obstetric participant who told the story described reduced anxiety, underlining that, while fear of adverse outcome and complaint was a motivator, fear was reduced when well documented three-way communication occurred. Three-way communication resulted in satisfactory negotiation of philosophical difference, acceptable to woman, midwife and obstetrician.

Midwives described their advocacy role when women declined care, sometimes mediating between women and the obstetric team. No literature was found describing this role of midwives as mediators between women and obstetricians. Differences in professional perceptions of whether power resided with the health professional or the woman became more evident when women chose alternative care pathways. Under such circumstances, midwife participants expressed greater comfort than obstetric participants with supporting women, echoing findings in the literature (Matthias, 2010). This did not assume that midwives agreed with all decisions or desires of women. However, findings revealed that when such conflict existed, LMC midwife participants recognised that decisions should be made in consultation with the woman, and the obstetric team if the woman consented to this. These differing comfort levels reflect the differing philosophies of NZCOM and RANZCOG. Supporting women who made informed choices outside the recommendations of the Referral Guidelines or current hospital policy fitted better with midwifery philosophy. In contrast, women's alternative choices caused greater discomfort for obstetricians as these choices opposed obstetric beliefs about optimal care.

Both midwives and obstetricians recognised the need for documented interprofessional communication when women's requests for care fell outside current best practice guidelines.

Obstetric participants sought opportunity for involvement in discussions with women and midwives about such alternative care choices, but midwives needed to be safe from criticism for women's informed decisions to decline or withdraw from care. The literature described robust conflict resolution processes as important for effective collaboration between midwives and obstetricians (Chang-Pecci et al., 2012). In the current study, both participant groups described situations where women made decisions outside current guidelines with satisfactory outcomes for woman, midwife, and obstetrician. Three-way communication between woman, midwife and obstetrician was a critical factor facilitating negotiation through alternative care pathways and philosophies.

7.2.3 Philosophical difference declining?

Awareness of the medical model of care was described by an obstetric participant who felt that the profession was moving from this authoritative standpoint to a more facilitative approach. This finding aligns with a description in the literature of the bio-psycho-social model of healthcare, described in Section 2.5.4, and now accepted by many doctors as more appropriate than the authoritative medical model (Abumadini, 2008). Challenge within the medical profession to the medical model of care might be expected to increase obstetric willingness to recognise women's autonomy and discuss different beliefs with midwives. The current study revealed that some obstetric participants were willing to negotiate with midwives. Obstetric willingness to negotiate, ceding a degree of authority, promoted positive interactions between women, midwives and obstetricians. Greater equality between the participants would be expected to improve collaboration, lead to emergence of mutually supportive ways of working and form a foundation on which positive outcomes could occur for all participants in maternity care. Certainly, obstetric participants described a shift in the study DHB to a position where there was greater alignment between LMC midwives and obstetricians on the most appropriate management pathway. It was unclear whether this resulted from increased willingness to negotiate by obstetricians, whether midwives had ceded to dominant medical culture, or elements of both. Given that dominance of medical philosophy was identified, both women and midwives may have become more accepting of medical interventions. Alternatively, the advocacy role of LMCs may have contributed to bridging of philosophical differences between obstetricians and women. There may have been improved use of three-way communication. Women with beliefs not aligning with obstetric beliefs may have been less likely to birth in hospital. Growing familiarity with the midwife-led model of maternity care may also have contributed to better interprofessional understanding. Comparison of studies in the literature suggested that interprofessional

relationships between midwives and obstetricians may be better in countries with longstanding midwife-led maternity systems (Skinner & Foureur, 2010; Warmelink et al., 2017) than in countries where midwife-led care was a newer phenomenon (Ratti et al., 2014). Probably all these elements have influenced the reported reduction of conflict. Conflict between midwives and obstetricians has been described as leading to poorer outcomes (Reiger, 2011). Therefore, a finding that conflict had reduced significantly with time suggested a safer maternity service. It is hoped that this also reflected improved ability to negotiate philosophical difference.

7.2.4 Positive interprofessional relationships

Participants from both groups reported usually positive interprofessional relationships, which were enhanced when effective three-way communication occurred. This finding echoed that of Skinner and Foureur (2010), who found usually positive relationships between LMCs and obstetricians, suggesting that similarly positive relationships might be found in other New Zealand DHBs. The study finding that positive interpersonal relationships between midwives and obstetricians could coexist with philosophical difference, suggested that such differences could be successfully negotiated.

In keeping with a theoretical approach of AI, features supporting positive collaborative relationships between midwives and obstetricians in the presence of philosophical difference were sought within participant responses. In the literature, flat hierarchies and greater midwifery autonomy were identified promoters of positive interprofessional relationships between midwives and obstetricians (Beasley et al., 2012; Downe et al., 2010; Hartz et al., 2012). Therefore, New Zealand's longstanding legislated right to autonomous midwifery practice might be an equalising force between the two professions. Other features supporting interprofessional collaboration were use of the communication tool SBARR (Marshall et al., 2009; Norris, 2017), and being known to each other (Downe et al., 2010; Lane, 2012).

Use of SBARR was policy for the study DHB and participants from both professional groups reported SBARR usage improved communication clarity. Furthermore, study participants widely reported that when they knew each other through having previously worked together or otherwise, their interactions were smoother with greater trust, aligning with findings in the literature that trust promoted positive interprofessional relationships between midwives and obstetricians (Downe et al., 2010; Reiger & Lane, 2009; Stevens, 2012). Conversely, challenges were reported for obstetric staff and LMCs new to the DHB, and for rurally based LMCs due to not being known to each other. Benefits of being known to each other

suggested a need to promote community between the two professions. Participants proposed a variety of ideas to foster community, addressed in Section 7.7.1.

Shared education and involvement in meetings on policy and quality control gave opportunity to develop constructive social relationships between midwives and obstetricians while promoting equality and ownership of decisions by both professions (Chang-Pecci et al., 2012; Meffe et al., 2012; Murray-Davis et al., 2014; Ratti et al., 2014). Shared education meant LMCs and obstetric staff were informed by the same sources, promoting consensus in decision making (Meffe et al., 2012; Murray-Davis et al., 2014). In the study DHB, there were examples of shared interprofessional education, for example PROMPT study days. Interprofessional meetings occurred at perinatal mortality meetings and there was collaboration to produce guidelines and protocols. This sharing of education and policy decision making was likely to have contributed to positive interprofessional relationships.

7.2.5 Summary of negotiating philosophical difference

This finding provided evidence that positive collaborative experiences between midwives and obstetricians could occur in the presence of philosophical difference. Longstanding existence of midwifery autonomy may have aided collaboration by having legislative recognition of professional independence, but other factors were also required. Positive relationships were promoted by being known to each other, identifying a need to foster community. The study identified power imbalance as potentially impeding collaboration. Involving LMC midwives in decision making relating to women's care reduced power imbalance between the two professions. When effective three-way communication occurred, power imbalance was reduced, and successful negotiation of philosophical difference usually resulted. Omission of three-way communication could exacerbate blurring of primary secondary interface boundaries.

7.3 Clarifying blurred boundaries

Both participant groups reported that primary secondary interface boundaries were sometimes unclear, describing several contributing factors. When consultation or transfer of clinical responsibility occurred, confusion over continuing LMC midwife responsibilities could remain, particularly if three-way communication was inadequate. Changes in the longstanding practice of LMCs undertaking secondary midwifery care duties was a significant contributor to blurring of boundaries. The role of the Referral Guidelines in ameliorating this uncertainty is analysed.

7.3.1 LMC midwives and provision of secondary midwifery care

Section 88 and the Referral Guidelines define primary maternity care, but the current study found uncertainty over limits of clinical responsibilities for LMC midwives contributed significantly to blurring of boundaries, particularly when women required secondary care in labour. The literature tells us that, in the past, it was usual for LMCs to provide the midwifery component of secondary care after handover to secondary maternity services (Skinner & Foureur, 2010). This practice of LMC midwives, although still occurring, appeared to be decreasing compared to past practice in the study DHB. The withdrawal of LMC midwives from secondary care created some tensions between LMC midwives and the secondary care team. Confusion over understanding of respective roles exacerbated blurring of primary secondary interface boundaries where disputes arose over who was responsible for the midwifery component of secondary care.

Provision of secondary midwifery care in collaboration with obstetricians is within the scope of practice of all New Zealand midwives, both core and LMC (MCNZ, 2010). The literature identified that women transferring from primary to secondary maternity care strongly valued continued involvement of their LMC (Grigg et al., 2015), demonstrating that the service provided by LMCs after transfer of clinical responsibility usually resulted in positive experiences for women. However, LMCs are not contracted or funded to provide secondary care (MoH, 2007, 2012). Neither Section 88 nor the Referral Guidelines require LMCs to provide secondary care other than emergency care. DHBs are funded to provide secondary midwifery services, raising an expectation that secondary midwifery care should be provided by core midwives. There is also an obligation for DHBs under the Health and Safety at Work Act 2015 for DHBs to ensure LMCs are not too fatigued to practice safely (Worksafe, 2017).

In the current study, insufficient core midwifery staff numbers in delivery suite was a confounding factor. Some midwife participants described difficulty handing over to secondary care midwives when DHB staffing levels were low, implying that sometimes there was pressure for LMCs to carry out secondary midwifery care. Both provision of secondary midwifery care by LMCs and reduction in its provision contributed to blurred boundaries. Unpredictable provision of secondary midwifery care by LMCs led to difficulty forecasting core midwifery staff requirements, potentially exacerbating DHB staffing shortages. This study finding echoed previous research reporting of blurred boundaries when LMCs referred women to secondary care (Norris, 2017).

It seems unreasonable that LMCs should regularly provide secondary care midwifery services that they were not paid for or contracted for, but this happened both historically and

at the time of the current study. It appeared that LMCs in the study DHB increasingly found the practice unsustainable, leading to reduced involvement of many LMCs in secondary midwifery care. Skinner (2011) identified that a motivator for LMCs to provide secondary midwifery care after handover of responsibility to secondary services was an ideological imperative to be 'with women', committing to continuity of care regardless of funding. Through idealism, LMCs may have contributed to an unfair working situation that was now difficult to withdraw from or alter. Ignoring the issue of secondary care provision by LMC midwives is likely to result in unplanned withdrawal from providing secondary services by LMC midwives, exacerbating existing DHB maternity staffing difficulties. Current study findings suggested this withdrawal was already happening.

If LMCs are obligated or choose to provide secondary midwifery care in labour and birth, there is a need to fund them in addition to Section 88 funding for primary care. Since the time of the study, a second midwife fee became available to allow remuneration of another LMC if the LMC had become excessively fatigued (Eddy, 2018). Initially this fee appeared to be applicable only to primary care only but is now available for LMCs undertaking secondary care. This does not address the fact that the first LMC receives no extra remuneration for provision of secondary midwifery care. A process of negotiation between NZCOM and the MoH, termed co-design, is ongoing and aims to develop a fairer remuneration package for LMCs to replace Section 88 (MoH, 2019). As negotiations remain confidential it is unclear whether this will result in any financial recognition of the LMC role in secondary midwifery care.

The study identified that, because of lack of clarity regarding midwifery responsibilities during secondary care in labour and birthing situations, effective three-way communication was critical in negotiating and clarifying responsibilities of core and LMC midwives at transfer of care to resolve this blurring of boundaries and maintain safety for mothers and babies.

7.3.2 The role of the Referral Guidelines in clarifying boundaries

Midwife participants all reported familiarity with the Referral Guidelines, usually using the list of conditions for referral to recommend referral to obstetric services to women. This finding gave evidence that the Referral Guidelines were usually used as intended by participant midwives, meeting their objective of promoting safety for mothers and babies. Participant familiarity with the Referral Guidelines in the current study aligned with literature findings that LMCs showed consistent referral rates (Skinner & Foureur, 2010).

While midwife participants regarded the Referral Guidelines as a valuable tool, obstetric participants had varied familiarity with the Referral Guidelines, often regarding them as a tool predominantly for midwives. Obstetric responsibilities under the Referral Guidelines are to accept appropriate referrals, to communicate in writing with LMCs in a timely manner after consultation, and to ensure three-way communication between woman, midwife and obstetrician regarding all decisions relating to a woman's care (MoH, 2012). The perception that the Referral Guidelines were only applicable to midwives may have led to ignoring these obstetric responsibilities. Current study findings were that while appropriate referrals were usually accepted, it was common for letters to LMCs to be untimely and for three-way communication to be inadequate or omitted, leading to frustration and disempowerment for LMCs.

The current study identified that the Referral Guidelines had an important role in clarifying blurred boundaries, but there were limitations to the extent to which they could fulfil this role and they did not resolve dilemmas with allocations of midwifery responsibility for secondary care. The evidence used to compile the Referral Guidelines could not be independently evaluated as they are unreferenced (MoH, 2012). This did not negate their usefulness, but validated observations by some participants that there were individual instances where their applicability could be questioned.

7.3.3 Resolution of boundary issues

The current study sought to identify means to clarify blurred boundaries, in keeping with AI. While participants criticised some individual referral criteria, both participant groups believed the Referral Guidelines improved clarity about which women should be offered referral to secondary services. Further, the Referral Guidelines specify a requirement for three-way conversations between woman, midwife and obstetrician whenever consultation or transfer of care occurred. Three-way communication was identified in this study as a key element in improving interprofessional relationships between LMCs and obstetricians. The list of conditions in the Referral Guidelines do not clarify issues such as who should be responsible for what component of ongoing care for individual woman after consultation. However, when three way-communication occurred effectively, study findings indicated that the usual result was satisfactory outcomes for midwives and obstetricians, and promotion of woman centred care. Participants reported that such communications were often untimely or inadequate. This identified a need to overcome obstacles to three-way conversations.

7.4 Facilitating three-way conversations

This research identified that three-way communication usually occurred satisfactorily when women, midwife and obstetrician were together. When women were seen non-urgently in antenatal clinic or urgently in WAU and the LMC was not in attendance, adequate or timely three-way conversations were reportedly less frequent. As the study identified common scenarios where three-way communication was insufficient, there was a need to find ways to facilitate and promote three-way communication, in keeping with the methodology of AI.

7.4.1 Collaboration in acute and non-urgent situations

Although participant midwives perceived communications between LMCs, obstetricians and other maternity staff in acute situations in the study DHB were usually effective, non-acute situations were more problematic. Untimely written communication from obstetricians led to frustration and extra work for LMCs. The literature identified that poor communication systems and processes could lead to poorer outcomes (Madden et al., 2011; Psaila , Schmied, Fowler , & Kruske, 2015; Schmied et al., 2015; Shaw et al., 2013).

Verbal communication was identified by participants as the optimal communication mode. In the past, LMC midwives had facilitated three-way communication by attending many first secondary care clinic appointments with women (Skinner & Foureur, 2010). Obstetric participants observed that LMC attendance in antenatal clinic was now a rare event. Whatever the cause, this probable change in LMCs' usual practice necessitated finding other means of facilitating three-way communication.

7.4.2 Improved systems and processes for non-urgent interprofessional communications

Study participants from both professions advocated for better use of IT including email communication and shared electronic records to facilitate timely information sharing. Some initiatives to improve use of current IT solutions were reported in the study DHB. Participants had a variety of proposals for improved use of IT solutions, addressed in section 7.7.1.

Midwife participants reported a lack of clear feedback pathways if women were unhappy with outcomes of obstetric consultations, or when referrals were lost. There was risk of women missing necessary secondary care appointments, carrying potential for adverse outcomes. Timely phone calls from obstetrician to LMCs reduced difficulties when decisions were controversial, but if not possible, a straightforward contact point was needed

to manage unresolved issues. Systems and processes to resolve conflict were identified as important in the literature (Chang-Pecci et al., 2012).

7.4.3 Use of intermediaries in communication

A significant study finding was that communication between LMC midwives, and obstetricians commonly involved intermediaries, usually DHB employed core midwives. Participants' reports suggested that intermediaries sometimes functioned well, but at other times, intermediary use impeded three-way communication. Two common scenarios were identified. Firstly, ACMMs mediated between LMCs and obstetricians regarding acute admissions to WAU and delivery suite. Secondly, core midwives commonly relayed information from obstetricians to LMCs when decisions were made relating to women's care. Fergusson et al. (2010) discussed one of the roles of ACMMs as mediating between LMCs and obstetricians regarding acute admissions to delivery suite and WAU. No other information on midwife intermediary roles in interprofessional communication in maternity care was found in the literature. Studies identified handover of care as a risk point for information loss, and that the more people there are in a chain of communication, the more potential there is for information loss and adverse outcome (Fealy et al., 2016; Spranzi, 2014). However, in the current study, intermediaries filled gaps where there might otherwise have been no communication.

Participant midwives and obstetricians perceived a pronounced difference in effectiveness between ACMMs and core midwives as intermediaries. Participants reported that ACMMs functioned well in the intermediary role. This finding aligned with literature reporting that LMC midwives valued the ACMM as a reliable contact point (Norris, 2017). In contrast, most midwife and some obstetric participants reported dissatisfaction with many core midwife intermediary communications. A possible explanation of the difference was that when ACMMs acted as intermediaries, the ACMM and the LMC midwife acted autonomously. Both had roles in facilitating management of a woman's needs. Both could make decisions and negotiate. Both could readily call a member of the obstetric team if the communication did not resolve her issue. This aligned with literature reporting that midwifery autonomy promoted successful interprofessional interaction and facilitated collaboration (Beasley et al., 2012; Downe et al., 2010; Hartz et al., 2012). In contrast, core midwife intermediaries relayed doctors' orders, usually having limited or no power to change management. Consequently, there was no direct pathway for LMC midwives to negotiate events such as timing of induction that impacted on their work situation. Both core midwife and LMC midwife were disempowered in this interaction. Power imbalance meant

the doctor decided, LMC midwives were excluded from decision making, and core midwives were mere messengers. The literature identified that medical dominance disempowered midwives and women and could be detrimental to effective communication (Lane, 2012; Ratti et al., 2014; Reiger, 2011; Reiger & Lane, 2009; Watson et al., 2016).

It will always be optimal for direct communication to occur between LMC and obstetrician. However, limited obstetric numbers with times of high clinical workload and difficulty contacting LMCs by phone may prevent obstetricians from talking to LMCs directly. A chain of communication is preferable to absent communication. The need for intermediaries in communication will persist, and the role needs to be optimised to facilitate satisfactory communication. Communication through intermediaries worked well when intermediaries were empowered to negotiate and were less effective when they only had a messenger role.

7.5 Strengths and limitations of the study

A pertinent question of all qualitative research is the transferability of study conclusions. DHBs vary in size, staffing levels, culture and policies and procedures and therefore care must be taken before generalising the conclusions. A strength of the study was that the findings aligned sufficiently with those in the literature to suggest that it was likely that the findings would be similar if the study were undertaken in other New Zealand DHBs and may have relevance to overseas maternity care providers. A limitation of the research was that it occurred within one DHB region and the sample size of 13 participants was small.

Another strength of the research was participant willingness to discuss all issues, both positive and critical, that they found relevant to interprofessional communication between LMCs and obstetricians at the primary secondary interface, and to offer solutions to barriers to communication. When the framework of AI was applied in data analysis, analysis of negative data was facilitated by seeking solutions to barriers to communication within participant responses, consistent with AI methodology.

A further strength of this research was the ability to contrast and compare the views of two groups of participants holding differing philosophical standpoints, seeking means to promote positive interprofessional communication between these two groups. This provided a balance of perspectives greater than had only one professional group been interviewed. However, a limitation was that this research did not examine women's perspectives of primary secondary interface interactions between midwives and obstetricians or understanding of the Referral Guidelines. Examining women's perspectives would have completed a triangle of understanding of three-way communication, elucidated to what

extent the two professions were providing a service that was satisfactory to women and explored what women's visons for improvement might be.

A further consideration in interpretation was the fact that the study participants were also my colleagues. There is potential that this phenomenon affected ease of recruitment, with midwives more readily recruited than obstetricians. This may also have altered what participants shared with me, either positively or negatively. I found participants spoke freely to me during research interviews, so my personal view is that this was unlikely to affect the research outcome. Certainly, no participants raised this dual role as problematic or withdrew from the study. However, I acknowledge that it is possible that this affected data collection in some way not obvious to me.

7.6 Reflection on Appreciative Inquiry as a theoretical perspective

Appreciative Inquiry (AI) was chosen as the theoretical perspective underpinning this research, to reassure participants that my agenda was positive, to encourage recruitment and to meet the aims of finding what worked well and generating positive solution to barriers to interprofessional collaboration. While I had usually positive relationships with obstetricians, there were some tensions and anecdotally this was also the experience of some of my LMC colleagues. I aimed to avoid causing or exacerbating tensions between LMCs and obstetricians. The literature review reported that such these tensions were common overseas (Behruzi et al., 2017; Downe et al., 2010; Lane, 2012; Ratti et al., 2014; Reiger, 2011; Shaw et al., 2013) and over a quarter of New Zealand LMC midwives did not report positive relationships with obstetricians (Skinner & Foureur, 2010). I believed this meant there was potential for the research to explore entrenched views rather than focusing on solutions. The positive framework of AI appeared the ideal way to avoid this outcome.

Recruitment of LMC midwives was accomplished easily. I don't believe this was influenced by the theoretical perspective but occurred because they knew I was a fellow LMC midwife who would likely understand their perspective. Also, as the non-dominant profession, systemic change that might occur as a result of their participation would be unlikely to worsen their position but may improve it.

Recruitment of obstetric participants was more difficult; no participants were recruited from an initial email promotion. This could have been because there was a shortage of obstetricians at the time of recruitment. Alternatively, there may have been reluctance to participate in midwifery research due to a perception that they, as representatives of the dominant profession, might be represented in a negative light. In a PowerPoint promotion to

obstetricians and obstetric registrars, I discussed the use of AI as a theoretical perspective, and following this presentation was readily able to recruit obstetric participants. Presentation of AI as the theoretical perspective may have aided in recruitment in that solutions were being sought rather than emphasising areas of conflict. A cooperative and mutually supportive team environment reduces interpersonal stress and is conducive to better clinical outcomes.

During the interviews, study participants shared many positive stories of their interprofessional communications. While I had always believed there were positive stories to discover, it was likely that framing interview questions from a perspective of AI elicited more such responses than might otherwise have been found. Inevitably, there were also some critical stories. The framework of AI using the Dream and Destiny phases as described by Ludema et al. (2001), addressed these situations well during interviews. When critical stories arose during interviews, I acknowledged the story and asked participants to describe what they believed should have happened and how they would propose to achieve their ideal. In many instances, participants were able to envisage ideal communication scenarios and give suggestions as to how to achieve this, so the AI helped participants to focus on solutions. I believe the lens of AI ensured that questions in the research questionnaire were positively framed to direct participants to give their vision for optimal communication and how to achieve this.

Considering how to use critical stories was challenging in a framework of AI. In section 3.1.4, I have examined the use by several researchers of critical data, finding that AI did not necessarily require omission of critical data (Bushe, 2011; Carter, 2006; Clouder & King, 2015; Johnson, 2013; Sidebotham et al., 2015). These authors interpreted AI as requiring the researcher to report criticisms alongside positive stories, and using them to seek solutions, where possible generated by participants. In this study, I have followed the lead of these authors. Omission of critical comments would misrepresent participants as much as a completely critical picture might have (Johnson, 2013). I found it was more difficult to use the theoretical perspective of AI than it would have been to simply report negative findings. However, the framework of AI ensured that my focus remained on constructive proposals for improvement. Carter (2006) describes presenting critical data alongside positive stories. On several occasions, I was able to do this by juxtaposing two similar scenarios, one negative and one positive to identify the factors that were present in positive communication scenarios and omitted from negative scenarios. For example, when ACMM midwives acted as intermediaries, between LMC midwives and obstetricians when acute admissions to WAU

or delivery suite occurred, all participants viewed this occurrence positively. In contrast, when core midwives acted as intermediaries conveying obstetric decisions to LMC midwives, participants saw this process as flawed. I was able to identify that ACMMs were empowered to negotiate with LMCs, while core midwives conveying information from obstetricians to LMC midwives were usually unable to negotiate. This juxtaposition of positive and negative made a more powerful argument for the proposal for improvement.

I have endeavoured to identify the proposal for improvement wherever possible, if critical material was presented. I believe I have usually achieved this. If considering similar research, I would examine other theoretical perspectives to evaluate whether these would serve the research purpose better. I am aware that not all those familiar with AI will agree with my interpretation of AI or see AI as the best theoretical perspective for this study.

7.7 Recommendations to facilitate communication between LMC midwives and obstetricians

Using the methodology of AI, this research generates recommendations to promote interprofessional collaboration between LMC midwives and obstetricians based on participant identification of barriers to collaboration and their proposals for change in the data. Some recommendations were already in place in the study DHB, and some improvements to systems and processes may have occurred since the study took place. The following points emerged from this research as recommendations that could be relevant to DHBs across New Zealand.

7.7.1 Recommendations for practice

- Three-way communication between woman, midwife and obstetrician should occur whenever women are referred to secondary services. In some non-acute situation this communication may be by timely letters.
- If controversy over care is identified, or decisions are being made that affect LMC midwife workload, direct verbal three-way communication between woman, LMC midwife and obstetrician should occur wherever possible.
- When direct verbal communication is impossible, use of midwife intermediaries in communication should be optimised. Intermediaries' important role filling information gaps are enhanced when they are empowered to negotiate with LMCs over non-urgent decisions affecting LMCs' workload.
- Documentation of handover in notes and on computer screens in delivery suite and WAU offices minimises information loss.

- It is important to identify roles and responsibilities of LMC midwives, core midwives, obstetricians and registrars working in delivery suite. Large name badges identifying roles, and different coloured scrubs for different professions could facilitate role identification.
- Clearly identified phone and email contact points for LMCs could address appointment issues and misunderstandings over management, improving conflict resolution. Appointment issues could often be resolved by administrators.
- Improved IT use offers solutions to several interprofessional communication barriers. Secure email would facilitate sending referral and response letters in a timely manner, minimising referral loss. Timely communications by email night reduce the need for midwife intermediaries. Obstetric staff could use dictation software for letters rather than typing pools. Teleconferencing or videoconferencing into secondary care clinic or WAU appointments by LMCs using current smart phone technology would facilitate three-way communication. Cloud based record keeping systems for DHBs and LMCs would increase capacity for information sharing. Computerised record keeping for LMCs with Referral Guidelines criteria readily accessible may reduce referral errors for midwives. Doctors could carry electronic notebooks to document phoned advice. Secure chat rooms for LMCs and core staff, obstetric and midwifery, could be used to debate some clinical issues. DHBs with dated communication systems would benefit from evaluating more up to date systems used in other DHBs to assist in deciding on optimal IT solutions.
- DHBs need to employ adequate core midwifery staff to provide secondary midwifery care at times of high demand so that LMCs are not used as unpaid default secondary midwifery care providers.
- If LMCs are obliged to carry out secondary midwifery care in labour and birth, this should be funded in addition to remuneration for primary midwifery care.
- Communication tools such as SBARR should be promoted as per the study DHB's policy, to facilitate clear communication. Documentation of all interactions is necessary to minimise information loss.

Being known to each other promoted interprofessional trust and respect, improving collaboration between LMCs and obstetricians. Shared social events, education and development of policy should be actively promoted to foster community between the two professions. Open days at hospitals and in primary birth units would promote community.

To improve familiarity with each other, new DHB staff and LMC access holders could be introduced in mini profiles which could be included in email newsletters.

7.7.2 Recommendations for research

- The roles of core midwives as intermediaries in communication between LMC midwives and obstetricians in maternity care in this study was an unexpected finding, with minimal information in the literature. How these intermediaries influence maternity care from the perspective of effective teamwork needs further exploration. Exploration of improved IT solutions for communication might reveal ways to reduce the need for intermediaries.
- Replicating the survey of Skinner and Foureur (2010) on the role of LMCs in secondary care would clarify whether changes in provision of secondary midwifery care by LMCs was a nationwide phenomenon or unique to the study DHB and delineate changes in LMCs' practice in the intervening 10 years.
- Further study of women's perspectives relating to three-way communication and the Referral Guidelines would build on the current research and that of Grigg et al. (2015), providing balance to the understanding of midwifery and obstetric perspectives.

7.8 Conclusion

The point where pregnancy and birthing digress from normal is a vulnerable time for women and babies. Effective communication between LMC midwives and obstetricians at the primary secondary interface has been identified in literature as vital to maintaining safe, satisfactory maternity experiences. This research sought understanding of what currently worked well in collaboration between LMCs and obstetricians, and solutions to barriers to effective communication. The emergent themes were the need to negotiate philosophical difference, to clarify blurred boundaries, and the vital role of three-way communication between women, midwives and obstetricians in facilitation of collaboration between the two professions.

Study findings indicated that positive interprofessional relationships between LMCs and obstetricians could coexist with philosophical difference, providing a platform for effective communication. Blurring of boundaries existed partly due to loose definitions of primary midwifery care. Blurring was exacerbated by the historically established practice of LMC midwives providing secondary midwifery care to women in their caseload after transfer of clinical responsibility to the secondary care obstetric team. There were apparent current

endeavours by LMC midwives to reduce their involvement in secondary midwifery care. An unexpected research finding of the important role of core midwives as intermediaries between obstetricians and LMC midwives was described. Effective three-way communication usually resolved philosophical difference and blurred boundaries, facilitating provision of safe, woman centred care.

Several barriers to collaboration and three-way communication were identified by participants, who had useful suggestions to overcome these barriers. A framework of AI was applied using participants' ideas to generate proposals to promote collaboration between the two professions. To optimise the safety of mothers and babies and facilitate positive collaboration between LMC midwives and obstetric doctors, three-way communication needs to become a universal part of maternal health care every time there is consultation, transfer of care or shared care.

References

Abumadini, M. (2008). An integrated approach to a psychiatric perspective: A bio-psycho-social model. *Journal of Family and Community Medicine*, *15*(1). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3377050/

Achterberg, J. (1990). *Woman as healer*. Boston, MA: Shambhala.

Allen, N. (2014). Building practice guidelines for health practitioners. *Information Outlook*, *18*(1), 15–17.

Alonso-Coello, P., Irfan, A., Sola, I., Gich, I., Delgado-Noguera, M., Rigau, D., … Schunemann, H. (2010). The quality of clinical practice guidelines over the last two decades: A systematic review of guideline appraisal studies. *Quality and Safety in Health Care*, *19*(6), 1–7. https://doi.org/10.1136/qshc.2010.042077

Amelink-Verburg, M., & Buitendijk, S. (2010). Pregnancy and labour in the Dutch maternity care system: What is normal? The role division between midwives and obstetricians. *Journal of Midwifery and Womens Health*, *55*(3), 216–225. https://doi.org/10.1016/j.jmwh.2010.01.001

Anderson, L., & Pelvin, B. (2006). Ethical frameworks for practice. In S. Pairman, J. Pincombe, C. Thorogood, & S. Tracy (Eds.), *Midwifery: Preparation for practice* (pp. 208–222). Sydney, Australia: Churchill Livingstone Elsevier.

Australian College of Midwifery. (2013). *National midwifery guidelines for consultation and referral* (3rd ed.). Retrieved from https://issuu.com/austcollegemidwives/docs/consultation_and_referral_guideline

Beasley, C. (1999). *What is feminism?* New York, NY: SAGE.

Beasley, S., Ford, N., Tracy, S. K., & Welsh, A. W. (2012). Collaboration in maternity care is achievable and practical. *Australian & New Zealand Journal of Obstetrics & Gynaecology*, *52*(6), 576–581. https://doi.org/10.1111/ajo.12003

Behruzi, R., Klam, S., Dehertog, M., Jimenez, V., & Hatem, M. (2017). Understanding factors affecting collaboration between midwives and other health care professionals in a birth center and its affiliated Quebec hospital: A case study. *BMC Pregnancy and Childbirth*, *17*(200), 1–14. https://doi.org.10.1186/s12884-017-1381-x

Bick, D., McCourt, C., & Beake, S. (2004). Choice, culture, and evidence-informed practice: Addressing the future of the U.K. maternity services. *Worldviews on Evidence-Based Nursing*, *1*(3), 162–164.

Bilous, E. (2018). *Gaining from giving: The benefits for midwives of working with student midwives* (Master's thesis, Otago Polytechnic, Dunedin, New Zealand). Retrieved from https://www.op.ac.nz/assets/Uploads/d3803cccbe/MID-Bilous-2018-thesis.pdf

Blaaka, G., & Eri, T. (2008). Doing midwifery between different belief systems. *Midwifery*, *24*(3), 344–352.

Blunt, C. (2016). Hierarchies of evidence. Retrieved from http://cjblunt.com/heirarchies-evidence

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bricker,L. (2014),Bricker, L. (2014). Optimal antenatal care for twin and triplet pregnancy: The evidence base. *Best Practice & Research: Clinical Obstetrics & Gynaecology*, *28*(2), 305–317. https://doi-org.op.idm.oclc.org/10.1016/j.bpobgyn.2013.12.006

Bushe, G. (2011). Appreciative inquiry: Theory and critique. In D. Boje, B. Burnes, & J. Hassard (Eds.), *The Routledge companion to organizational change* (pp. 87–103) Oxford, UK: Routledge.

Carter, B. (2006). 'One expertise among many'— Working appreciatively to make miracles instead of finding problems: Using appreciative inquiry as a way of reframing research. *Journal of Research in Nursing*, *11*(1), 48–63.

Cahill, A., Tuuli, M., Odibo, A., Stamilio, D., & Macones, G. (2010). Vaginal birth after caesarean for women with three or more prior caesareans: Assessing safety and success. *British Journal of Obstetrics and Gynaecology*, *117*(4), 422–428.

Cartwright, S. (1988). *The Cartwright Inquiry 1988*. Retrieved from https://www.nsu.govt.nz/health-professionals/national-cervical-screening-programme/legislation/cervical-screening-inquiry-0

Chang-Pecci, C., Mottl-Santiago, J., Culpepper, L., Heffner, L., McMahan, T., & Lee-Parritz, A. (2012). The birth of a collaborative model: Obstetricians, midwives, and family physicians. *Obstetrics & Gynecology Clinics of North America*, *39*(3), 323–334. https://doi.org/10.1016/j.ogc.2012.05.001

Clouder, L., & King, V. (2015). What works? A critique of Appreciative Inquiry as a research method/ology. In J. Huisman, & M. Tight (Eds.), *Theory and method in higher education research* (Vol. 1, pp. 169–190). Retrieved from https://www.emerald.com/insight/content/doi/10.1108/S2056-75220150000001008/full/html

Collins English dictionary (9th ed.). (2007). Glasgow, Scotland: HarperCollins.

Cartwright, S. (1988). *The Cartwright Inquiry 1988*. National Screening Unit. Retrieved from:

Chang-Pecci, C., Mottl-Santiago, J., Culpepper, L., Heffner, L., McMahan, T., & Lee-Parritz, A. (2012). The birth of a collaborative model: obstetricians, midwives, and family physicians. *Obstetrics & Gynecology Clinics of North America*, *39*(3), 323–334. Retrieved from:

Cooperrider, D., & Srivastva, S. (1987). Appreciative inquiry in organisational life. *Research in Organizational Change and Development*, *1*(1),129–169.

Davis, P., Lay-Yee, R., Briant, R., Ali, W., Scott, A., & Schug, S. (2002). Adverse events in New Zealand public hospitals I: Occurrence and impact. *The New Zealand Medical Journal*, *115*(1167), 1–9.

Donley, J. (1998). *Birthrites: Natural vs unnatural childbirth in New Zealand*. Christchurch, New Zealand: The Full Court Press.

Downe, S., Finlayson K., & Fleming A. (2010). Creating a collaborative culture in maternity care. *Journal of Midwifery & Women's Health*, 55(3), 250–254. https://doi.org/10.1016/j.jmwh.2010.01.004

Eddy, A. (2018). Second midwife support. Retrieved from https://www.midwife.org.nz/news/second-midwife-support/

Fealy, G., Munroe, D., Riordan, F., Croke, E., Conroy, C., McNamara, M., & Shannon, M. (2016). Clinical handover practices in maternity services in Ireland: A qualitative descriptive study. *Midwifery*, *39*, 20-26.

Fergusson, L., Smythe, L., & McAra-Couper, J. (2010). Being a delivery suite coordinator. *New Zealand College of Midwives Journal*, *42*, 7–11.

Furber, C., & Thomson A. (2010). The power of language: A secondary analysis of a qualitative study exploring English midwives' support of mother's baby-feeding practice. *Midwifery*, *26*(2), 232–240. https://doi.org/10.1016/j.midw.2008.05.003

Gorman, A. (2016). California lawmakers consider allowing nurse-midwives to practice without physician supervision. *State of Health.* Retrieved from https://www.kqed.org/stateofhealth/222385/california-nurse-midwives-may-soon-be-allowed-to-practice-without-physician-supervision

Graham, H., Tokhi, M., Edward, A., Salehi, A., Turkmani, S., Duke, T., & Bartlett, L. (2015). Use of clinical guidelines: Perspectives from clinicians in paediatric and maternity hospitals in Kabul, Afghanistan. *Eastern Mediterranean Health Journal*, *21*(2), 100–11

Grigg, C. P., & Tracy, S. K. (2013). New Zealand's unique maternity system. *Women and Birth*, *26*(1), e59–e64.

Grigg, C. P., Tracy, S. K., Schmied, V., Monk, A., & Tracy, M. (2015). Women's experiences of transfer from primary maternity unit to tertiary hospital in New Zealand: Part of the prospective cohort Evaluating Maternity Units study. *BMC Pregnancy & Childbirth*, *15*, 1–12. https://doi.org/10.1186/s12884-015-0770-2

Guilliland, K., & Pairman, S. (2010). *The midwifery partnership. A model for practice*. (2nd ed.). Christchurch, New Zealand: The New Zealand College of Midwives.

Guise, J., Segel, S., Larison, K., Jump, S., Constable, M., Li, H., … & Zimmer, D. (2011). STORC safety initiative: A multicentre survey on preparedness & confidence in obstetric emergencies. *Quality and Safety in Health Care*, *19*(41), 1–6. https://doi.org/10.1136/qshc.2008.030890

Hartz, D. L., Foureur, M., & Tracy, S. K. (2012). Australian caseload midwifery: The exception or the rule. *Women and Birth. 25*(1), 39-46.

Health and Disability Commission. (1996). Code of Health and Disability Services Consumers' Rights Regulations, 1996. Retrieved from https://www.hdc.org.nz/your-rights/about-the-code/code-of-health-and-disability-services-consumers-rights/

Health and Disability Commission. (2019a). Decisions. Care of woman with high risk factors. Retrieved from https://www.hdc.org.nz/decisions/search-decisions/2019/16hdc00144/

Health and Disability Commission. (2019b). Decisions. Postdates monitoring of pregnant woman Retrieved from https://www.hdc.org.nz/decisions/search-decisions /2019/16hdc00188/

Health Practitioners Competence Assurance Act 2003. Retrieved from http://www.legislation.govt.nz/act/public/2003/0048/latest/DLM203312.html

Healy, M., & Gillen, P. (2017). Planning birth in and admission to a midwife-led unit: Development of a GAIN evidence-based guideline. *MIDIRS Midwifery Digest*, *27*(1), 26–32.

Hicks, C. (1992). Research in midwifery: Are midwives their own worst enemies? *Midwifery*, *8*(1), 12–18.

Hindley, C., & Thomson, A. (2007). Intrapartum fetal monitoring and the spectre of litigation. *Clinical Governance*, *12*(4), 233–243. https://doi.org/10.1108/14777270710828900

Johnson, P. C. (2013). Transcending the polarity of light and shadow in appreciative inquiry: An appreciative exploration of practice. In D. L. Cooperrider, D. P. Zanee, L. N. Godwin, M. Avital, & B. Boland (Eds.), *Organizational generativity: The Appreciative Inquiry summit and a scholarship of transformation* (Vol. 4, pp. 189–207). Retrieved from

https://www.emerald.com/insight/content/doi/10.1108/S1475-9152(2013)0000004007/full/html

King, M. (2003). *The Penguin history of New Zealand*. Auckland, New Zealand: Penguin Books.

Kohn, L., Corrigan, J., & Donaldson, M. (2000). *To err is human: Building a safer health system*. Washington, DC: National Academies Press.

Landon, M., Spong, C., Thom, E., Hauth, J., Bloom, S., Varner, M., … Gabbe, S. (2006). Risk of uterine rupture with a trial of labor in women with multiple and single prior cesarean delivery. *Obstetrics & Gynecology*, *108*(1), 12–20.

Lane, K. (2012). When is collaboration not collaboration? When it's militarized. *Women and Birth*., *25*, 29–38.

Liebling, A., Price, D., & Elliott, C. (1999). Appreciative inquiry and relationships in prison. *Punishment & Society*, *1*, 71–97. https://doi.org/10.1177/14624749922227711

Lokugamage, A., & Pathberiya, S. (2017). Human rights in childbirth, narratives and restorative justice: A review. *Reproductive Health*, *14*, 1–8. https://doi.org/10.1186/s12978-016-0264-3

Lowe, G. (2010). Scope of emergency nurse practitioner practice: Where to beyond clinical practice guidelines? *Australian Journal of Advanced Nursing*, *28*(1), 74–82.

Ludema, J., Cooperrider, D., & Barrett, F. (2001). Appreciative inquiry: The power of the unconditional positive question. In P. Reason, & H. Bradbury (Eds.), *Handbook of action research* (pp. 189–208). London, UK: SAGE.

Lutgendorf, M., Spalding, C., Drake, E., Spence, D., Heaton, J., & Morocco, K. (2017). Multidisciplinary in situ simulation-based training as a postpartum hemorrhage quality improvement project. *Military Medicine*, *182*(3/4), e1762–e1766. https://doi.org/10.7205/MILMED-D-16-00030

Madden, E., Sinclair, M., & Wright, M. (2011). Teamwork in obstetric emergencies. *Evidence Based Midwifery*, *9*(3), 95–101.

Marshall, S., Harrison, J., & Flanagan, B. (2009). The teaching of a structured tool improves the clarity and content of interprofessional clinical communication. *Quality & Safety in Health Care*, *18*(2), 137–140. https://doi.org/10.1136/qshc.2007.025247

Matthias, M. (2010). The impact of uncertainty on decision making in prenatal consultations: Obstetricians' and midwives' perspectives. *Health Communication*, *25*(3), 199–211. https://doi.org/10.1080/10410230903544977

Maxwell, E., Black, S., & Baillie, L. (2015). The role of the practice educator in supporting nursing and midwifery students' clinical practice learning: An appreciative inquiry. *Journal of Nursing Education & Practice*, *5*(1), 35–45.

Meffe, F., Claire Moravac, C., & Espin, S. (2012). An interprofessional education

pilot program in maternity care: Findings from an exploratory case study of undergraduate students. *Journal of Interprofessional Care*, *26*(3), 183-188.

Medical Council of New Zealand.(2018). Annual Report 2018. Retrieved from: https://www.mcnz.org.nz/about-us/publications/annual-reports/

Midwifery Council of New Zealand. (2010). Midwifery (scope of practice and qualifications) notice 2010. Retrieved from https://www.midwiferycouncil.health.nz/midwives/midwifery-scope-practice

Midwifery Council of New Zealand. (2016). 2016 Midwifery workforce survey. Retrieved from https://www.midwiferycouncil.health.nz/about-us/publications/midwifery-workforce-survey-2016

Ministry of Health. (1990). The Nurses Amendment Act 1990. Retrieved from http://www.moh.govt.nz/notebook/nbbooks.nsf/0/7E9811383ED959B34C2565D7000DE831

Ministry of Health. (2003). Health Practitioners Competence Assurance Act. Retrieved from https://www.health.govt.nz/our-work/regulation-health-and-disability-system/health-practitioners-competence-assurance-act

Ministry of Health. (2007). Primary Maternity Services Notice 2007. Notice pursuant to Section 88 of the New Zealand Public Health and Disability Act 2000. Retrieved from https://www.health.govt.nz/system/files/documents/publications/s88-primary-maternity-services-notice-gazetted-2007.doc

Ministry of Health. (2012). Section 88 of the New Zealand Public Health and Disability Act 2000, in the Primary Maternity Services Notice 2007. Retrieved from https://www.health.govt.nz/publication/guidelines-consultation-obstetric-and-related-medical-services-referral-guidelines

Ministry of Health. (2014a). He Korowai Oranga. Retrieved from https://www.health.govt.nz/our-work/populations/maori-health/he-korowai-oranga

Ministry of Health. (2014b). Report on maternity 2014. Retrieved from http://www.health.govt.nz/publication/report-maternity-2014

Ministry of Health. (2015). Health of the health workforce 2015. Retrieved from http://www.health.govt.nz/publication/health-health-workforce-report-2015

Ministry of Health. (2018). Primary health care. Retrieved from https://www.health.govt.nz/our-work/primary-health-care

Ministry of Health. (2019). Updates on work with the maternity services sector. Retrieved from https://www.health.govt.nz/our-work/life-stages/maternity-services/updates-work-maternity-services-sector#august

Munro, S., Kornelsen, J., & Grzybowski, S. (2013). Models of maternity care in rural environments: Barriers and attributes of interprofessional collaboration with midwives. *Midwifery, 29(*6), 646-652.

Murray-Davis, B., McDonald, H., Rietsma, A., Coubrough, M., & Hutton, E.

(2014). Deciding on home or hospital birth: Results of the Ontario choice of birthplace survey. *Midwifery, 30*(7), 869-876.

National Health and Medical Research Council. (2010). National guidance on collaborative maternity care. Retrieved from http://www.nhmrc,govt.au_files_nhmrc.file/publications/synopses/CP124_maternity%20guideline.pdf

New Zealand College of Midwives. (n.d.). New Zealand midwifery. Retrieved from https://www.midwife.org.nz/midwives/midwifery-in-new-zealand/

New Zealand College of Midwives. (2012). Standards of practice. Retrieved from https://www.midwife.org.nz/midwives/professional-standards/standards-of-practice/

New Zealand College of Midwives. (2015). *Midwives handbook for practice*. Christchurch, New Zealand: Author.

New Zealand College of Midwives (2016). Multidisciplinary guidelines. Retrieved from https://www.midwife.org.nz/quality-practice/practice-guidance/multidisciplinary-guidelines/

New Zealand College of Midwives. (2019). Timeline of events. College's actions to secure pay equity for self-employed community midwives. Retrieved from https://www.midwife.org.nz/midwives/pay-negotiations/

Norris, M. (2017). *What works well at the interface of midwifery care handover. A qualitative study* (Master's thesis, Auckland University of Technology, Auckland, New Zealand). Retrieved from https://openrepository.aut.ac.nz/handle/10292/11011

Ogburn, J., Espey, E., Pierce-Bulger, M., Waxman, A., Allee, L., Haffner, W., & Howe, J. (2012). Midwives and obstetrician-gynecologists collaborating for native American women's health. *Obstetrics & Gynecology Clinics of North America*, *39*(3), 359–66. https://doi.org/10.1016/j.ogc.2012.05.004

Orange, C. (1989). *The story of a treaty*. Wellington, New Zealand: Allen & Unwin.

Ottewill, M., Urben, J., & Elson, D. (2007). Safe hand-over: safe care. *Midwives*, *10*(11), 508-9.

Perdion, K., Lesser, R., Hirsch, J., Barger, M., Kelly, T., Moore, T., & Lacoursiere, D. (2013). A midwifery-led in-hospital birth center within an academic medical center. *Journal of Perinatal & Neonatal Nursing*, *27*(4), 302–310. https://doi.org/101097/JPN.0b013e3182a3cd42

Perinatal and Maternal Mortality Review Committee. (2018). *Twelfth annual report of the perinatal and maternal mortality review committee*. Retrieved from https://www.hqsc.govt.nz/assets/PMMRC/Publications/12th-PMMRC-report-final.pdf

Psaila, K., Schmied V., Fowler C., & Kruske, S. (2015). Interprofessional collaboration at transition of care: Perspectives of child and family health nurses and midwives. *Journal of Clinical Nursing*, *24*(1/2), 160–172. https://doi.org/10.1111/jocn.12635

Ratti, J., Ross, S., Stephanson, K., & Williamson, T. (2014). Playing nice: Improving the professional climate between physicians and midwives in the Calgary area. *Journal of Obstetrics & Gynaecology Canada*, *36*(7), 590–597.

Reiger, K., (2011). "Knights" or "knaves"? Public policy, professional power, and reforming maternity services. *Health Care for Women International*, *32*(1), 2–22. https://doi.org/10.1080/07399332.2010.529218

Reiger, K., & Lane, K. (2009). Working together: Collaboration between midwives and doctors in public hospitals. *Australian Health Review*, *33*(2), 315–324.

Romijn, A., Teunissen, P., de Bruijne, M, Wagner, C., & de Groot, C. (2018). Interprofessional collaboration among care professionals in obstetrical care: Are perceptions aligned? *British Medical Journal: Quality & Safety*, *27*, 279–286.

Royal Australian and New Zealand College of Obstetricians and Gynaecologists. (2018). Our work. Retrieved from https://www.ranzcog.edu.au/Our-College/Our-Work

Sandars, J., & Murdoch-Eaton, D. (2017). Appreciative inquiry in medical education. *Medical Teacher*, *39*(2), 123–127. https://doi.org/10.1080/0142159X.2017.1245852

Schmied, V., Homer, C., Fowler, C., Psaila, K., Barclay, L., Wilson, I., … & Kruske, S. (2015). Implementing a national approach to universal child and family health services in

Australia: Professionals' views of the challenges and opportunities. *Health & Social Care in the Community*, *23*(2), 159–170. https://doi.org/10.1111/hsc.12129

Shaw, B., Hamilton, S., & McCullogh, M. (2013). Collaborative working within community maternity services – Is this the chink in the armour? *British Journal of Midwifery*, *21*(4), 285–291.

Sidebotham, M., Fenwick, J., Rath, S., & Gamble, J. (2015). Midwives' perceptions of their role within the context of maternity service reform: An appreciative inquiry. *Women & Birth*, *28*(2), 112–120. https://doi.org/10.1016/j.wombi.2014.12.006

Silverton, L. (2017). Mind your language. *British Journal of Midwifery*, *25*(10). https://doi.org /10.12968/bjom.2017.25.10.618

Skinner, J. (2011). Being with women with risk: The referral and consultation practices and attitudes of New Zealand midwives. *New Zealand College of Midwives Journal*, *45*, 17–20.

Skinner, J., & Foureur, M. (2010). Consultation, referral, and collaboration between midwives and obstetricians: Lessons from New Zealand. *Journal of Midwifery and Women's Health*. *55*(1), 28–37. https://doi.org/10.1016/j.jmwh.2009.03.015

Smythe, L., Payne D., Wilson S., & Wynyard, S. (2009). Warkworth Birthing Centre: Exemplifying the future. *New Zealand College of Midwives Journal*, *41*, 7–11.

Spranzi, F. (2014). Clinical handover on the labour ward: A narrative synthesis of the literature. *British Journal of Midwifery*, *22*(10), 738–745. https://doi.org10.12968/bjom.2014.22.10.738

Statistics New Zealand. (2018). Population. Retrieved from https://www.stats.govt.nz/topics/population

Stevens, J., Witmer, T., Grant, R., & Cammarano, D. (2012). Description of a successful collaborative birth center practice among midwives and an obstetrician. *Obstetrics & Gynecology Clinics of North America*, *39*(3), 347–357. https://doi.org/10.1016/j.ogc.2012.05.003

Trajkovski, S., Schmied, V., Vickers, M., & Jackson, D. (2013). Using appreciative inquiry to transform health care. *Contemporary Nurse*, *45*(1), 95–100.

Warmelink, J., Wiegers, T., de Cock T., Klomp, T., & Hutton, E. (2017). Collaboration of midwives in primary care midwifery practices with other maternity care providers. *Midwifery*, *55*, 45–52. https://doi.org/10.1016/j.midw.2017.08.010

Watson, B. M., Heatley, M. L., Gallois, C., & Kruske, S. (2016). The importance of effective communication in interprofessional practice: Perspectives of maternity clinicians. *Health communication*, *31*(4), 400-407.

Worksafe. (2017). Health and Safety at Work Act 2015. Retrieved from https://worksafe.govt.nz/laws-and-regulations/acts/hswa/

Yang, Y., Attanasio, L., & Kozhimannil, K. (2016). State scope of practice laws, nurse-midwifery workforce, and childbirth procedures and outcomes. *Women's Health Issues*, *26*(3), 262–267. https://doi.org/10.1016/j.whi.2016.02.003

Appendices

Appendix 1. New Zealand studies on interprofessional interaction between midwives and obstetricians

Author	Year	Location	Research methods	Results
Grigg et al.	2015	New Zealand	Mixed method survey of 174 women on experiences of transfer from primary to secondary maternity care	Majority of women reported positive experiences. Important role of LMC in positive experiences. Communication failure implicated in the minority of negative experiences.
Skinner	2011	New Zealand	Mixed method 6 Focus groups 32 midwives Further analysis of data from Skinner and Foureur (2010)	40% of primary care midwives accompany women to first secondary care antenatal consultation. Strong commitment to being "with women" through continuity of care.
Skinner & Foureur	2010	New Zealand	Likert scales Primary care midwives: 433 Data from 4251 women	35% consultation rate with secondary services. 43% of consultations led to transfer of clinical responsibility. 72% of MW felt supported by obstetricians to continue care after transfer to secondary services.

Appendix 2. International studies on interprofessional interaction between midwives and obstetricians

Author	Year	Location	Research methods	Results
Beasley et al.	2012	Australia	Mixed method Retrospective notes analysis from weekly meetings between midwives and obstetricians in a hospital-based Midwifery Group practice setting. Midwife-led care for 337 women.	50% of women discussed at interprofessional meetings 35% referral to obstetric service Consistent management practices described. High satisfaction with model of care experiences reported by midwives and obstetricians
Behruzi et al.	2017	Canada	Qualitative study of midwife led birth centre and obstetric hospital interactions Semi-structured interviews: Administrators: 4 Family physicians: 2 Obstetricians: 5 Nurses: 9 Midwives: 5 Field notes over 3 years Review of guidelines for transfer, minutes of meetings, obstetric workshops	Predominantly poor communication between midwives and obstetricians. Organisational culture a barrier to collaboration. Distrust in midwifery profession expressed by doctors Philosophical difference was a barrier to collaboration.
Chang-Pecci et al.	2012	U.S.	Case report of US Birthing unit with a changed model of care aimed at greater collaboration. Previously midwives, obstetricians and family physicians worked in the unit in isolation from each other.	Improved interprofessional relationships with collaborative model of care. Collaboration promoted by regular interdisciplinary meetings, encouraging a flat hierarchy, conflict resolution processes, and shared education for midwifery and medical students
Downe et al.	2010	U.K	Literature review of collaborative practices in the U.K, U.S. and Australia	Medical dominance and philosophical difference were reported as barriers to collaboration. Collaboration promoted by clear role boundaries, effective conflict resolution processes, trust, effective organisational structures.
Lane	2012	Australia	Analysis of submissions for medical, midwifery and consumer organisations to the Maternity Services Review and Senate Reviews from 2008-2010.	Legislative obligation to collaborate for midwives, not for obstetricians. Assumptions amongst doctors that midwives will not collaborate NOT borne out. Collaboration possible without legislative requirement.

Author	Year	Location	Research methods	Results
Matthias	2010	U.S	Qualitative In depth interviews and recorded consultations Midwives: 2 Obstetricians: 2	Midwives used more facilitative and equalising language Midwives were more comfortable than obstetricians with women's choice opposing professional's advice.
Ogburn et al.	2012	U.S.	Case report of rural based collaborative midwife led service for indigenous women, introduced because of higher maternal and perinatal mortality for indigenous women.	Reduced preterm birth and reduced caesarean rates with midwife led service High rates of successful VBAC Collaboration promoted by strong midwifery leadership, clear role boundaries, respectful relationships Cost effective model of care.
Perdion et al.	2013	U.S.	Case report of in hospital midwife led birth centre	10% caesarean rate 98% breast feeding at discharge. Initial issues of mistrust by doctors. Interprofessional collaboration promoted by consistent leadership, use of multidisciplinary guidelines, respectful interactions.
Ratti et al.	2014	Canada	Mixed methods Survey Primary care midwives: 25 Obstetricians: 37 Family physicians: 56	97% of obstetricians and 100% of midwives felt interprofessional relationships could improve. Participants reported that relationships improving with time Power imbalance favoured obstetricians. Philosophical difference was a barrier to collaboration.
Reiger & Lane	2009	Australia	Review of four large qualitative research projects on collaboration between midwives and obstetricians in a tertiary hospital, a secondary hospital, a regional birthing unit and a small rural birthing unit. Interviews and focus groups. Midwives: 134 Obstetricians: 36 Managers: 17 Tertiary and rural unit studies included observational studies of staff meetings, shift handovers and interprofessional meetings.	Philosophical differences, competition, incivility, excessive workloads lead to interprofessional tensions Trust, respect, civility, and accountability valued by midwives and obstetricians. Equality for midwives promoted collaboration.
Romijn et al.	2018	Netherlands	Quantitative Survey Obstetricians: 74 Hospital midwives: 42 Nurses: 154 Primary care midwives: 109	Positive interprofessional relationships reported. Obstetricians rated their interprofessional relationships with nurses and midwives more highly than midwives or nurses.

Author	Year	Location	Research methods	Results
Shaw	2013.	U.K.	Mixed method 6 in depth interviews of 'key players' unspecified Questionnaires Midwives 10 GPs 20 Professional forum of midwives, GPs and managers	Poor systems and processes impaired collaboration Infrequent interprofessional meetings and exclusion of midwives from meetings that do occur Poor referral pathways
Stevens et al.	2012	U.S.	Case report of a primary birth centre established through collaboration of a midwife and an obstetrician	Collaboration supported by: Regular practice meetings. Equal recognition of medical and midwifery care models Mutual respect and trust Shared development of practice guidelines Well defined scopes of practice Midwifery autonomy
Warmelink et al.	2018	Netherlands	Quantitative study: survey using Likert scales. Primary care midwives: 99	44.9% of primary care midwives reported positive relationships with obstetricians Philosophical difference a barrier to collaboration.

Appendix 3. Ethics approval Otago Polytechnic: Copy of letter granting approval

11 July 2017

Rachel Cassie 9 Houhere Place
Hamilton 3200

Dear Rachel

Re: Application for Ethics Consent

Reference Number: 737

Application Title: How do midwives and obstetricians communicate at the primary/

secondary interface? Thank you for your application for ethics approval for this project.

The review panel has considered your revised application including responses to questions and issues raised. We are pleased to inform you that we are satisfied with the revisions made and confirm ethical approval for the project.

Many thanks for your careful responses to our recommendations.

We wish you well with your work and remind you that at the conclusion of your research you should send a brief report with findings and/or conclusions to the Ethics Committee. All correspondence regarding this application should include the reference number assigned to it.

Regards

Dr Liz Ditzel
Deputy Chair
Ethics Committee
Otago Polytechnic

Appendix 4. Approval to proceed from Kaitohutohu office

Email approval from Kaitohutohu

Kia ora and thank you Rachel for your information and project outline for consultation.
The Office of the Kaitohutohu supports your application for Ethics Approval.
Go well
Naku noa
Richard Kerr-Bell

On behalf of the Office of the Kaitohutohu
richardkb@op.ac.nz
021427865

From: Rachel Cassie <rachelcassie@clear.net.nz>
Date: Tuesday, 23 May 2017 at 10:25 AM
To: Kaitohutohu <Kaitohutohu@op.ac.nz>
Subject: Consultation for Masters of Midwifery research project

Kia Ora,

My name is Rachel Cassie and I wish to consult on my proposed research topic for my Masters of Midwifery degree. I am Pakeha New Zealander and a New Zealand trained midwife of 10 years' experience, most of this as a lead maternity carer in the Waikato region. My research area is communication between midwives and obstetricians at the primary secondary interface. I have attached a brief summary of my research proposal and the answers to the questions on your website. I would be grateful for your feedback and guidance,

Nga mihi nui,

Rachel Cassie
LMC Midwife
New Additions Midwives
6D Avalon Drive
Hamilton 3200
Ph 07 8499495
Mobile 021 270 9920

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

Appendix 5. Promotional email and participant information form

Project title

How do midwives and obstetricians communicate at the primary / secondary interface?

General Introduction

Kia ora, my name is Rachel Cassie, and I am embarking on a research project for my masters of midwifery degree through Otago Polytechnic. The project will explore interprofessional communication between midwives and obstetricians at the primary secondary interface (the point of contact when midwives consult with or transfer clinical responsibility to obstetricians). If you are a currently practicing LMC midwife or an obstetrician currently practicing in the public sector you may be a participant in this research. I will be asking you about your experiences of interprofessional communication, and your knowledge of and use of Ministry of Health (2012) guidelines for referral. Interprofessional communication refers to any interaction relating to consultation or transfer of care from midwife to obstetrician. Communication may be verbal (by phone or face to face) or written, in referral letters and replies. If you are available to participate in this study, please contact me at **CASSR3@student.op.ac.nz** or phone **021 270 9920.**

What is the aim of the project?

My aim is to discover what works well currently, how the guidelines are being used, your vision for ideal communication and your suggestions on how this could be achieved.

How will potential participants be identified and accessed?

You will be invited to participate via and email through NZCOM Waikato email database (Midwives) or Waikato DHB or Lakes DHB email databases(obstetricians). Promotional information will also be sent to Waterford Birth centre, River Ridge Birth centre, Te Awamutu Birthing and Birthcare Huntly

If you are available to participate in this study please contact me at CASSR3@student.op.ac.nz or phone **021 270 9920.**

What types of participants are being sought?

Midwives: currently practicing fulltime or part-time as an LMC midwife in New Zealand.
Obstetricians: currently practicing full or part time in obstetrics in a public hospital in New Zealand.

What will my participation involve?

You will be asked to participate in a one on one interview with myself, at a time and place of your choosing. I am able to travel to you. The interview will be approximately one-hour long. I will tape record the interviews, have them transcribed by a research assistant and return them to you so you can check my transcript for accuracy.

How will confidentiality and anonymity be protected? - see Otago Polytechnic Research Guidelines to determine whether you can promise these conditions.

All transcripts of interviews will have names replaced with a numerical code. Any identifying details will be removed from transcripts. I will employ a research assistant to transcribe tapes, and she will sign a confidentiality agreement. My transcripts may be

reviewed by my 2 supervisors through Otago polytechnic. No-one else will have access to the data.

What data or information will be collected and how will it be used?

Recordings of interviews will be transcribed. Themes emerging from the data will be reported and analysed in my master's thesis. Results of this project may be published but any data included will in no way be linked to any specific participant.
You may email me to request a copy of the results of the project when completed at CASSR3@student.op.ac.nz

Data Storage

Recordings will be transcribed by a research assistant who has signed a confidentiality agreement. Data will be stored on my password protected computer in my locked home office. Tape recordings will be stored in a locked drawer in this office. At the end of the project any personal information will be destroyed for any raw data on which the results are based. The transcripts will be retained in secure storage for a period of five years, after which they will be destroyed/deleted.

Can participants change their minds and withdraw from the project?

You can decline to participate without any disadvantage to yourself. If you choose to participate, you may withdraw from the project without giving reasons for your withdrawal. Withdrawal from participation can occur at any time until after you have checked the transcript from your interview and returned this to me. Just send an email to me at **CASSR3@student.op.ac.nz** or text me on phone **021 270 9920.**

You can also withdraw any information that has already been supplied until the stage agreed on the consent form. You can also refuse to answer any particular question, and ask for the audio/video to be turned off at any stage.

What if participants have any questions?

If you have any questions or concerns about the project, either now or in the future, please feel free to contact myself (email **CASSR3@student.op.ac.nz** or phone **021 270 9920.** or my supervisor Jean Patterson at Otago Polytechnic phone **0800 762 786:**

Any additional information given or conditions agreed to will be noted on the consent form.

Appendix 6. DHB approval of research by the study DHB

Waikato DHB Approval of Research

RD017071	How do midwives and obstetricians communicate at the primary / secondary interface?

Project Personnel

Principal Investigator:	Assoc Prof Jean Patterson (supervisor for Master's Degree) Otago Polytechnic Jean.patterson@op.ac.nz 0800 762 786
Waikato DHB named investigators:	Rachel Cassie rachelcassie@clear.net.nz 021 270 9920 / 07 849 9495
Primary contact name and contact details (email and phone):	Rachel Cassie
Date Submitted:	10/06/2017
Type of Project:	Observational: qualitative/epidemiological
Multisite?	Multi-centre, Waikato DHB sub-site
Department:	Obstetrics
Service:	Women's Health
% of Māori with condition of interest	2.7% NZ Doctors identify as Maori 9% of midwives identify as Maori
What are your plans for recruiting Māori?	There may be participant obstetricians or midwives who identify as Maori
Is ethnicity a variable in your study? (Māori c.f. non-Māori)	No
Will your study involve collecting tissue samples?	No
Will you expect to publish your results?	Yes
Finance/Resource Requirements: **(eg staff time, extra clinics, extra procedures, consumables)**	Participants will be asked to participate in an interview of approximately 1 hour at a time convenient to them. No other cost to the DHB. Costs to researcher: Recording equipment$100 approx

	Research assistant to transcribe recorded interviews 32 hours approximately $640 Koha (small gift to participant under $10 in appreciation of time) $160 Petrol vouchers. The researcher will travel to the participant in most cases. However if the participant incurs travel costs these will be reimbursed $60

Project Description (300 words max – background, aim, methods):
Start Date: 10/06/2017
End Date: 31/03/2019
Sample Size: 6

This research focuses on the point of care when midwives and obstetricians interact to consult or handover clinical responsibility of care in the New Zealand maternity system. Primary maternity care in New Zealand is provided by a lead maternity carer (LMC) who may be a midwife, a general practitioner (GP) or an obstetrician. 93.4% of LMCs were midwives in 2014. (Ministry of Health 2015). Midwives (and GPs) refer to obstetric and related medical services when pregnancy becomes complicated. Collaboration between midwives and obstetricians is a critical component of good maternity care. Good communication is likely to lead to improved maternity outcomes. The Ministry of Health (2012) has published recognised guidelines for consultation and referral between LMC and obstetric services which set standards for communication between primary and secondary care providers.

I propose conducting and recording semi-structured interviews with obstetricians currently practicing in the public sector in New Zealand and LMC midwives currently practicing in New Zealand, using a theoretical perspective of appreciative inquiry. Appreciative inquiry comes from a perspective that there are positives in all working environments. It aims to discover what works well, elicit participants' vision for an ideal world and their practical suggestions on how to move towards the ideal. Questions will explore participants' experiences of inter-professional communication when consultation or handover from primary to secondary care occurs.

I aim to improve knowledge on what is working well for participants, what they envisage as ideal, their visions for improved communication, and how the Ministry of Health guidelines for referral are being used. Thematic analysis will be used to analyse data and propose potential paths to improved communication at the primary secondary interface. I propose inviting obstetricians to participate in one on one semi-structured interviews conducted by myself at a time convenient to the participants, via Waikato DHB's email databases. I have also approached Lakes DHB and may approach other DHBs depending on response rates. LMC participants will be accessed through New Zealand College of Midwives (NZCOM). Discovering means to improve communication has the potential to benefit health outcomes for mothers and babies.

Management and Resource Sign-offs

This study does not require HDEC review. (Will have University/Polytechnic ethics)

Locality Review – *the undersigned agree to the following statements:*

- The study protocol and methodology are ethical and scientifically sound.
- This researcher has identified that this study does not require Health & Disability Ethics Committee (HDEC) review.
- The local lead investigator is suitably qualified, experienced, registered and indemnified.
- Resources, facilities and staff are available to conduct this study, including access to interpreters if requested.
- Cultural consultations have occurred or will be undertaken as appropriate
- Appropriate confidentiality provisions have been planned for.
- Appropriate arrangements are in place to notify other relevant local health or social care staff about the study, and for making available any extra support that might be required by participants, where relevant.
- Conducting this research will have no adverse effect on the provision of publicly funded healthcare.
- There is a stated intent that the results of the study will be disseminated and where practical and appropriate the findings of the study will be translated into evidence based care.

Queries about this research must be made to the Primary Contact person listed.

Dept/Service/ Org	Role	Name (print clearly)	Signature	Date signed
Obstetrics	Clinical Director	Isabel Camano		4/8/17
Women's Health	Clinical Unit Leader	Narena Dudley		3/8/17
Women's & Child Health	Director	Michelle Sutherland		31/07/17
Te Puna Oranga	Service Development Manager	Millie Berryman	*See attached letter*	N/A

Clinical Support Services Sign-offs

CROSS OUT/ADD SIGN-OFFS APPLICABLE TO THIS PROJECT

SIGNATORIES DECLARATION: We agree that appropriate resources are available in our service to support this project

Clinical Support Service	Name (print clearly)	Signature	Date signed
~~DHB Pharmacy~~	~~Rajan Ragupathy AND~~		
~~DHB Pharmacy~~	~~Marinda van Staden OR Jan Goddard~~		
~~Laboratory~~	~~Kay Stockman~~		
~~Radiology~~	~~Glenn Coltman~~		
~~Medical Records~~	~~Marilyn Hunt~~		

Please return to the Research Office (via Sarah Brodnax, 13 Ohaupo Road) along with required documents as identified in the checklist for final approval.

Office use only:
Quality & Patient Safety, Waikato DHB

Signature: **Date:** 10/8/2017

Name: Mo Neville, Director Quality & Patient Safety **Position:**

Appendix 7. Consent to recruit obstetric participants from Te Puna Oranga Maori Consultation Research Review Committee

Te Puna Oranga Māori Consultation Research Review Committee

12 July 2017

Re: Māori Consultation for 'How do midwives and obstetricians communicate at the primary / secondary interface?'

Name of Applicant: Rachel Cassie

Tēnā Koe Rachel,

Thank you for submitting the above research proposal to the Waikato DHB Te Puna Oranga Māori Health Research Committee for Māori consultation. The research application has been reviewed in order to support and prompt the researcher to think about how this research will improve health outcomes and eliminate inequity for Māori living within the Waikato DHB region.

1. The Committee acknowledges the researchers for collecting ethnicity data as part of a demographic background of the participant to improve data collection for Māori in order to improve Māori health outcomes and reduce inequity for Māori.

2. The Committee encourages the research team to actively recruit equal numbers of Māori and Non-Māori. Any Research that involves Māori participation would require sufficient face to face time for fully informed consent to occur. Inclusion of the whānau of the Māori participant should be encouraged to support the continued engagement of the Maori participant in the research process.

3. The Committee encourages all research that involves participation of individuals, especially Māori participants to fully inform them regarding the detail of tissue collection. One consent form for the current use of Tissue. One consent form for the future use of tissue (this should be clear to the participant).

4. If cultural issues arise for the Māori participant during any research, they will inform the research team during the study that an issue has occurred. Cultural issues may not be obvious to the participant or the researcher prior to commencement of the research.

5. The Committee encourages the research team to continue to consult with Te Puna Oranga, Māori Health service at any time, should they have any further queries.

6. Feedback regarding this research is appreciated and can be shared back to the Kaunihera Kaumatua via Te Puna Oranga Māori Health Service

The Committee endorses this research proposal with the consideration of the above cultural recommendations where appropriate. The Committee acknowledges that the researcher is not collecting ethnicity data for this study.

Millie Berryman
Kaitakawaenga Māori
Te Puna Oranga-Maori Health Service
Millie.Berryman@waikatodhb.health.nz

Appendix 8. Promotional poster

LMC Midwives and obstetricians wanted for research project

Project title

How do midwives and obstetricians communicate at the primary / secondary interface?

Introduction

Kia ora, my name is Rachel Cassie, and I am embarking on a research project for my masters of midwifery degree through Otago Polytechnic. The project will explore interprofessional communication between LMC midwives and obstetricians at the primary secondary interface.

Who can participate?

- Currently practicing LMC midwives
- Obstetrician currently practicing in the public sector

What will my participation involve?

You will be asked to participate in a one on one interview with myself, at a time and place of your choosing. I am able to travel to you. The interview will be approximately one-hour long. I will tape record the interviews, have them transcribed by a research assistant and return them to you so you can check my transcript for accuracy. All information is confidential and no identifying information will be published. Questions will focus on your interactions with obstetricians at the primary secondary interface, your use of the Ministry of health Guidelines for referral (formerly section 88 guidelines) and your vision for improved communication and how might this be achieved.

If you are available to participate in this study or would like further information, please contact me at:

CASSR3@student.op.ac.nz or **Phone 027 737 327**

Appendix 9. Consent to expand participant criteria to include obstetric registrars

From: Research <Research@waikatodhb.health.nz>
Sent: Friday, 27 October 2017 11:40 AM
To: Rachel Cassie (1000006603)
Subject: RE: Rachel cassie Research application RD017071

Hi Rachel. Both Isobel and Narena have said they are happy with including obstetric registrars in the research; and with the extension. I haven't heard back from Michelle Sutherland; but if Isobel and Narena are happy, I think that is approved!

Regards
Sarah

Sarah Brodnax | Coordinator – Governance | Quality & Patient Safety | Waikato DHB
p 07 839 8899 ext 23589 | e sarah.brodnax@waikatodhb.health.nz

From: Rachel Cassie (1000006603) [mailto:CASSR3@student.op.ac.nz]
Sent: Monday, 23 October 2017 15:32
To: Research
Subject: Re: Rachel cassie Research application

Dear Sarah,

Just an update on my research project "How do Midwives and Obstetricians communicate at the primary secondary interface". While I have had a lot of response from midwives, I have not had any from obstetricians as yet. Before considering further promotion of the research to obstetricians, I would like to open the participant criterion to include obstetric registrars as there is such a small pool of obstetricians. Please let me know what is required from the research committee and obstetric department to do so.

I would also like to let you know that the timeline for the research has extended by 3-6 months as I have unexpectedly had a doubling of my midwifery caseload due to my midwifery partner going off on long term sick leave. I propose taking some months off LMC practice from April next year so that I can complete the masters.,

kind regards,

Rachel Cassie

Appendix 10. Interview guide

How do midwives and obstetricians communicate at the primary secondary interface?

Questionnaire for obstetricians and midwives

Introductory questions:

How long have you been a midwife/obstetrician?

Did you train in NZ or overseas?

What is your ethnicity?

Can you describe your current work environment?

Communication

By communication I am referring to all verbal and written communications between LMC midwives and the obstetric team.

In your practice how do you communicate with midwives/obstetricians at the primary-secondary interface? Verbal? Written?

What different circumstances does interprofessional communication occur in?

Can you talk about an instance of communication?

- in referral/response letters?
- When phoned advice is sought?
- In an emergency?

Can you talk about what optimal communication looks like?

- in referral/response letters?
- When phoned advice is sought?
- In emergencies?

Can you describe a situation where communication with a midwife/obstetrician was optimal? Doesn't have to be in this hospital/setting. What made communication optimal in this instance?

What facilitates optimal communication between obstetricians and midwives?

If communication becomes negative, say So I hear that you are saying is that it is really important that… occurs. How do things look when this does happen?

Optimising communication

What improvements you would like to see in regard to consultation and referral practices?

How would interprofessional communication between midwives and obstetricians look in an ideal world?

How could we work towards optimising interprofessional communication?

Potential reflective question, so I am hearing that … is what you are saying, is that correct?

How did you feel about that? Can you tell me more about that?

Referral Guidelines

Are you familiar with the Guidelines for Consultation with Obstetric and Related Medical Services accessible through the NZ Ministry of Health website? (Referral Guidelines) (Formerly a part of the Section 88 Maternity notice)

How do you use the referral guidelines?

How do these guidelines influence your practice and that of colleagues?

Can you describe a situation when the guidelines have been useful in facilitating communication? Can you clarify/give more detail?

How do the guidelines function to protect New Zealand mothers and babies?

The guidelines require that transfer of care is a negotiated 3-way process between obstetricians, midwives and women. How does this three-way process occur? Can you describe how information transfer occurs?

What would facilitate optimal use of the three-way conversation?

What changes could be made to the guidelines that would improve it as a facilitator of interprofessional communication?

Summary

Do you have any additional thoughts on interprofessional communication and how to optimise this?

Appendix 11. Consent to participate in research project

Consent Form

Project title

How do midwives and obstetricians communicate at the primary / secondary interface?

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

I know that:

- My participation in the project is entirely voluntary.
- I am free to withdraw at any time until after I have checked my transcript without giving reasons and without any disadvantage.
- The data (including video or audio) will be deleted at the conclusion of the project but the transcripts, stripped of identifying material, on which the results of the project depend will be retained in secure storage for five years after which it will be deleted.
- If I incur any travel costs, I will receive a petrol voucher.
- The information gathered in this project will be transcribed by a research assistant who has signed a confidentiality clause. All identifying material will be stripped from the transcripts and participants will be identified by a numerical code. Material obtained will be used for the researcher's current masters of midwifery dissertation and any publications arising from this. Once the project is completed the data will not be used further.

Additional information given or conditions agreed to

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

..... *(signature of participant)*

..... *(date)*

.....*(signature of researcher)*

Appendix 12. Research assistant confidentiality agreement

Research Assistant Confidentiality Form

Midwifery Research Project: How do midwives and obstetricians communicate at the primary / secondary interface?

Research Co-ordinator: Rachel Cassie, New Additions Midwives, 6D Avalon Drive, Hamilton 3200

Agree to maintain the confidentiality of the participants and potential participants in the research titled: Do students completing a blended learning satellite model curricular of midwifery education feel prepared for midwifery practice?

I agree to:

- Keep confidential the identity and names of any of the participants and not divulge them to anyone including the researcher.
- Administer and oversee the completion of the survey by the participants.
- Store the survey forms in a locked cabinet during the process of data entry.
- Enter the number codes and data and from the surveys into an excel spreadsheet.
- Keep the survey forms in a locked cabinet and the spreadsheet protected by a password during the process of data entry.
- Remove the data according to the number code for any participant midwife or obstetrician who wishes to have their survey form data, and/or text comments withdrawn.
- Supply the survey forms in a sealed envelope and the electronic file of the de-identified data to Rachel Cassie at the completion of the data entry.

Signature Research Assistant: 

Date: 23rd July 2017

Signature Researcher: 

Date: 24/7/17