Midwifery in New Zealand 1990-2003: the complexities of service provision.

by

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CERTIFICATE OF AUTHORSHIP/ORIGINALITY

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ABSTRACT

This Professional Doctorate in Midwifery explores the development of maternity services in New Zealand subsequent to legislative changes in 1990 enabling midwives to provide the same services as doctors and access the same funding for the provision of care for childbearing women. The papers in this portfolio describe and analyse challenges faced by New Zealand midwives in achieving their full potential as autonomous health professionals and the strategies they developed to survive within a healthcare environment that despite changes, remained medicalised.

Throughout this portfolio, a theoretical framework based on complexity theory provides a lens for critique of the varying challenges to midwifery development and strategies to progress the profession. The seven papers that make up this portfolio were developed and written over a five-year period from 1999 to 2003. During this time I was involved in various activities supporting midwifery in New Zealand, including the establishment of a postgraduate midwifery programme and participation in the refocusing of both the New Zealand College of Midwives and the Midwifery and Maternity Provider Organisation. These activities took me to various parts of the country, enabling me to maintain contact with midwives from a variety of settings.

The first paper sets the scene for the portfolio by exploring the socio-political context of contemporary midwifery in New Zealand. The second paper tracks the emergence of a theoretical framework out of Complexity theory and presents a set of principles, which guide the critique of midwifery services and professional development, explored in the subsequent papers. Part Three documents the development of a contextual scanning tool, used to analyse the organisation of maternity care by midwives in rural settings. Part Four presents the findings of the scan and strategies for consolidating the role of midwives as key providers of maternity services in rural localities. Part Five documents the development of a programme for optimising midwifery leadership within the health sector, while Part Six explores the risks and opportunities for midwives with the development of clinical governance strategies by District Health Boards. Part seven focuses on strategies to increase the potential for midwives to consolidate, maintain and further develop community-based maternity services throughout the country.

This portfolio provides an organisational analysis of contemporary maternity services in New Zealand and presents a multifaceted approach to securing midwifery as a key

health profession and midwives as the main provider of maternity services to women in this country. The findings of this collection of works, identified midwifery in New Zealand as precariously positioned within a rapidly changing health service environment. While appearing most vulnerable, midwifery within the rural and primary settings appeared to offer the most potential for innovative development in order to secure the place of midwives as the prime providers of health care for women in childbirth.

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Finally I would like to thank the midwives throughout New Zealand who, one way or another, contributed to this doctorate. In respect for the courageous way in which they translated the vision of the profession in 1990 into reality, I would like to dedicate this thesis to you. I never ceased to be amazed at how so many gentle, ordinary women, with the burden of family and community life, embraced the profession of midwifery in this country and took it to a place we never dreamed of 12 years ago.

GLOSSARY AND ABREVIATIONS

This set of definitions and abbreviations below were developed to inform and clarify terminology that is in common usage in the New Zealand health service environment.

Access Agreement: an agreement outlining terms by which a self-employed maternity practitioner may access a maternity facility for the purposes of providing in-patient care to their clients[1].

Birthing facilities: these institutions (mainly hospitals) have been approved to offer a venue for birthing women. In New Zealand the facilities have been defined within four categories[2].

Birthing Unit: These facilities provide inpatient services during labour and birth, but no postnatal stay.

Primary maternity facility: These provide inpatient services for labour, birth and the immediate postnatal period until discharge home. They are also referred to as:

- Level 0 or Level 1 maternity units
- Cottage hospitals
- Rural maternity units
- General practitioner units
- Community maternity hospitals.

Secondary maternity facility: These hospitals provide additional care during antenatal, labour, birth and postnatal periods for mothers and babies who experience complications and have a clinical need to have care overseen by an obstetrician. They are also referred to as Level two facilities or provincial maternity hospitals/services. They have access to obstetricians, epidurals and caesarean sections.

Tertiary maternity facility: These hospitals provide a regional maternity service for woman and their babies who have high and complex needs requiring access to a multidisciplinary team. These are also referred to as Level three maternity facilities or high-level obstetric units.

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[1] Ministry of Health (2002) Notice issued pursuant to Section 88 of the New Zealand Public Health and Disability Act 2000 concerning the provision of Maternity Services.

2 Health Funding Authority (2000) Maternity Services: a reference document.

Continuity of care: This is synonymous with the Lead Maternity Carer concept (defined below). This means provision of maternity care to a woman for the duration of her childbearing experience given principally by the same provider.

Core midwife: A registered midwife who is employed to provide midwifery services within a maternity facility. This role was developed to work in conjunction with the role of the Lead Maternity Carer (doctor or midwife) as outlined in Section 51/88 (MOH, 1996/98) and does not include the provision of continuity of care. These midwives form part of the service outlined in the maternity facility service specifications and are paid by the facility out of the facility fee, not Section 51/88.

Crown Health Enterprise (CHE): The name given to hospital and health services following the market modelled health reforms introduced by the Health and Disability Services Act (1993).

District Health Board (DHB): A representative health organisation, which, following legislation in 2000 was charged by the Ministry of Health to plan, fund, co-ordinate and provide health services for the population in their district. In 2002 there were 21 DHBs in New Zealand.

Independent midwife: This generally refers to a self-employed midwife.

Lead Maternity Carer (LMC): The General Practitioner, Midwife or Obstetric Specialist who has been selected by the woman to provide her comprehensive maternity care including the management of her labour and birth. The woman signs a 'registration form', which is lodged in the health system, naming the specific provider. This provider is the only one who is entitled to payment for the LMC maternity care. The woman has to sign a change of registration form if she wants to have another provider (MOH, 2002), unless she is referred by the LMC to specialist services.

Maternity Benefit Schedule: The public funding and payment mechanism that remunerated midwives and doctors providing maternity care for women in the community, prior to the advent of Section 51 in 1996.

Maternity facility: A facility, mostly hospitals, that provides both labour and birth services and inpatient postnatal care.

Midwifery and Maternity Provider Organisation (MMPO): An organisation established by the New Zealand College of Midwives in 1997 to manage a national midwifery database, provide business support and budget hold for self-employed midwives.

Midwifery Autonomy: This term is synonymously used to refer to midwives who practice without medical supervision and a midwife who takes on a LMC role. Basically this term was used to describe the impact of the 1990 Nurses Amendment Act which enabled registered midwives in New Zealand to practice without medical supervision and claim the same funding and hospital access privileges as general practitioners who provide maternity services.

Ministry of Health (MOH): The government body which funds, monitors and oversees the provision of health services throughout New Zealand.

New Zealand College of Midwives (NZCOM): The professional body representing midwifery in New Zealand with 85% of all practising New Zealand midwife members (Communication with CEO of NZCOM, 2002).

Regional Health Authority: This organisation emerged out of an amalgamation of the four Health Funding Authorities in 2000 as an attempt to mitigate the impact of the funder:provider split.

Secondary maternity services: Provision of comprehensive specialist obstetric services for women antenatally, in labour and birth and during the postnatal period. This includes specialist referral services including obstetrics, paediatrics and radiology.

Section 51: This was issued firstly in 1996, and modified in 1998, pursuant to Section 51 of the Health and Disability Services Act (1993). It provided a detailed service specification and payment schedule for individual maternity practitioners who were taking on the role of Lead Maternity Carer (LMC). This schedule represented a shift from fee-for-service as in the Maternity Benefit Schedule, to a fee-for-case model.

Section 88: Section 51 transitioned into Section 88 of the New Zealand Public Health and Disability Act (2000) when the Health and Disability Services Act (1993) was superseded by this legislation.

PROLOGUE

My personal and professional midwifery experiences have shaped and influenced my interest in the subject of this doctorate; they also gave me a level of access to midwives and their practices settings that would otherwise have been difficult to achieve. My experience of maternity services as a mother, a midwife, a midwifery lecturer, a maternity manager and later within the Ministry of Health as a contract analyst, gave me a greater understanding of the complexity of health service provision in New Zealand. My recent activities as a midwifery lecturer and involvement in the New Zealand College of Midwives (NZCOM) afforded ongoing contact with a variety of midwives from throughout the country.

The professional doctorate provided me with an opportunity to more fully explore and contextualise my own professional activities as a midwife, through analysing the progress of others, while I continued to balance the work of multiple projects. The doctorate has been with me for the past five years, another project, a potentially boundaryless undertaking, that for the purposes of meeting academic requirements is being brought to a close. It represents the product of a reflective journey as I have moved, often as an active participant, through various phases of midwifery and maternity service development in this country.

I have always felt energised by engaging in multiple roles simultaneously. I compartmentalise activities well when needed, yet see connections between them, when an initial glance may have revealed none. I always have a number of projects on hand at one time. If one becomes a burden, I switch to another, yet in the back of my mind I am cognisant a solution for one project may be found in another. The concept of a professional doctorate fitted well with this philosophy.

MAPPING MY MIDWIFERY JOURNEY

I registered as a nurse in New Zealand in 1972, then four years later registered as a midwife. I 'trained' as a midwife in the old hospital-based system (a 6 month apprenticeship followed by a State examination). Following registration I worked part-time in a variety of positions while childrearing. I gave birth to my daughters in the 'old system' with the 'high and hot enemas', plenty of pethidine and unquestioningly agreed to interventions I now know were unjustified. With loud bullying midwives and the fear of making a noise in case I became the talk of the hospital, I would have to describe my birthing experiences as a misery and something I have rarely shared with others. As a

young mother I listened to other womens' stories, most were as miserable as mine. I was ashamed of being a midwife at the time. Fortunately I worked night duty, so few knew, unless I came across them in the dead of night, scurrying with their baby tucked under my arm to slip it into their bed with them for a cuddle and a feed. I hoped the supervisor would not catch me allowing a mother to spend the night with her baby rather then have me 'top it up' with a bottle to 'give the mother a rest'.

During the same time, I also embarked on a sociology degree, rejecting nursing studies which was the only other graduate health education option open to me at the time. The Women's Studies Department had just been established in the Sociology Department at the university. Attendance at some sessions run by this Department gave me the skills and knowledge to more critically focus on my interest and frustrations with 'systems', particularly the health system in which I was working at the time. I also had an emerging interest in organisational management issues, so boldly completed an additional business studies paper at the university where I was one of a few women among the hundred or so in the class. I was in my final year of study, and shocked at the unquestioning use of behavioural psychology as the disciplinary underpinning for business studies. I had difficulty with this 'scientific' and individualistic view focusing on what I perceived to be the manipulation of individual human responses rather than considering the impact of social interaction when theorising how a person would act in a given situation. Sociology had given me a new way of viewing the world.

I was working at a tertiary maternity hospital as a midwife when I finished my degree in 1987. My home life and studies had been compartmentalised away from work and few knew I had been attending university. In 1989, I was invited to become a lecturer in 'obstetrics' in the nursing programme. The following year I moved on to teach midwifery in the 'Advanced Diploma in Nursing' course, a component of which prepared registered nurses to gain registration as midwives. Becoming a midwifery teacher seemed to be a natural progression in my professional life. I was also very involved at the time in the development and establishment of the New Zealand College of Midwives.

The passing of the 1990 Nurses Amendment Act was a memorable event for me and definitely a turning point in my midwifery life. I was teaching midwifery within a post registration nursing programme at the time. At last I had the leverage to set up a separate Diploma in Midwifery programme for registered nurses. This was achieved the following year. The ultimate goal was to set up a three year direct-entry midwifery

programme. This had been achieved in Auckland and Dunedin by 1992. With resistance by the polytechnic Nursing Department (in which the Diploma in Midwifery programme was located), it seemed to me, at the time, an unlikely prospect that a Degree in Midwifery would be established ahead of a Degree in Nursing. I became very disillusioned and weary from trying to bring about change as the sole midwifery lecturer in such a hostile environment.

In 1994, I left teaching to return to practice with substantial experience and new additional knowledge of management principles and a passion for the development of a truly woman centred model of midwifery care. With a group of 14 midwives, I set about converting an urban maternity ward within a general hospital, into a continuity of midwifery care service for local women. We completely remodelled the service, providing total continuity of care for all women birthing in the 10 bed birthing unit. This unit supported about 500 births a year. We reconfigured the physical layout of the ward, renegotiated the midwives' employment contract, developed the role of the core (facility based midwife), moved all the nursing staff to positions as nurses in other parts of the hospital and developed new staffing (non-nursing) roles to assist in the running of the unit. We computerised management and monitoring systems. The midwives and support staff ceased wearing uniforms and women wore day clothes. We also renegotiated the location of the birthing service within the hospital's organisational structure. As the midwifery practice manager of the service I reported directly to the hospital manager rather than the nursing managers or clinical directors. An 'oversight' in hospital restructuring, six months prior to my arrival, had resulted in the unit having no medical staff responsible for clinical services, a situation I was keen to maintain!

During this time I completed a Masters degree in Public Health in 1996 with a dissertation exploring the development of indicators of quality maternity hospital care[1]. I also became increasingly involved in the management of projects for the hospital as a whole. I managed the establishment of a respiratory rehabilitation service on the same principles as the birthing service, which were patient centred. For 12 months I took on the role as Director of Nursing of a large tertiary hospital, which had recently undergone a very public inquiry into patient safety and improved systems of delivering better quality services.

[1] *A comparison between consumers' and providers' perceptions of quality maternity hospital care.* Unpublished thesis. Otago University (NZ)

In 1998, I decided to return to midwifery education part-time and take up consultancy work in a project management capacity. In the following five years I managed over 40 projects. These were not always restricted to the area of maternity services and included hospital design and staffing reviews, auditing of both services and health education programmes, contract reviews, contract negotiation and management for the Ministry of Health (mainly in maternity, sometimes in disability services), independent service reviews and service evaluations. I also formed part of a multidisciplinary research team investigating clinical leadership and the development of clinical governance structures within health services in New Zealand. I also became a board member of the Clinical Leaders Association of New Zealand (CLANZ), a multidisciplinary organisation with the goals of supporting the development and maintenance of clinical practitioners in leadership and management roles within health services. These activities have all informed and enhanced the professional doctorate journey. The relationships between my academic and professional journey, for the duration of the professional doctorate, will be described at the beginning of each part of this portfolio.

INTRODUCTION

Contemporary maternity services within New Zealand communities are predominantly organised and provided by midwives. Midwives provide the majority of Lead Maternity Carer (LMC) services to pregnant women (MOH, 2003), meaning that a midwife will be the main care provider for an individual pregnant woman for the duration of her childbearing experience. Within the hospital setting, however, the ability of midwives to organise and develop maternity services are mitigated by the influence of the other professions, health service management, health funders and politicians. New Zealand midwives, through gaining parity with general practitioners in 1990, were successful in obtaining a degree of independence not previously imagined by the nurse-midwife of the past. But was this only illusionary? As long as midwifery services in New Zealand remain dependent on public funding, and more particularly hospital services, they will continue to be vulnerable to the developments and changes that occur in services they interface with, and have a dependence upon.

This portfolio describes and analyses aspects of these contemporary maternity services in New Zealand and midwives' involvement in their development. The mosaic produced by the pieces of work are based on the concepts of 'scanning', which is explored more fully in Part Three of the portfolio. The choice of scanning, rather than a deep investigation of one specific aspect of the service, is supported by the concepts of complexity theory. Within this framework, the maternity system is viewed as a complex adaptive system, undergoing change constantly. By the time a system is fully described, it will have taken a different shape.

Essentially, each piece of this portfolio stands frozen in time and is therefore limited. The most useful aspects of the analysis therefore, will be the patterns that emerge from the pieces that construct the viewer's perception of the whole. The portfolio presents my analysis of how midwifery in this country has adapted over time to a constantly challenging health service environment.

MAPPING THE DOCTORAL JOURNEY

This professional doctorate portfolio is divided into seven parts, each part, representing a key aspect of the field of inquiry. This is centred on the organisation of maternity services by midwives in New Zealand after 1990, particularly focusing on those in rural and primary maternity facilities where I believe midwives have the greatest opportunities to consolidate their scope of practice. The interest and enthusiasm

gained investigating, discussing with colleagues and writing up each section over the past five years, directly impacted on my professional life. Over the time, I embarked on a number of projects that I would otherwise not have been brave enough to tackle. It also enabled me to move into roles which allowed me to apply my newfound knowledge. The introductory section in each part of the doctorate will situate my professional journey in relation to that area of inquiry.

The New Zealand Midwifery Context

In recent years there has been international interest in the development of maternity service arrangements that would meet the needs of childbearing women in a more individualised and holistic way. While these initiatives appear to have been more economically than philanthropically driven (Campbell & Garcia,1997), the results appear to have caused an upheaval in maternity services in various countries[1]. New Zealand was no exception. By the late 1980s home birth was at its lowest ebb (Donley, 1997). The challenge to move away from the predominant 'birth centric' medically focused model of maternity care practised within this country, led to a convoluted journey undertaken by New Zealand midwives and women towards a seemingly utopic vision espoused by the Department of Health at the time. This was that:

> *'each woman, (and her whanau/family) has a safe and fulfilling outcome to her pregnancy and childbirth through the provision of programmes and services that are based on partnership, information and choice. Pregnancy and childbirth are normal life stages for most women with appropriate additional care available to those women who require it' (NZ Department of Health , 1990 in NZ HFA, 2000:10).*

Multifaceted changes to the provision of maternity services were heralded in 1990 by legislation, enabling midwives to practice without supervision of a midwife who was also a nurse, or doctor (1990 Nurses Amendment Act). At the time of implementation of this legislation, a culture of midwifery as a profession, separate from nursing was new to most midwives in this country. The majority of practising midwives had initially trained as registered nurses, 'direct entry' midwifery education having ceased in 1979 (Papps & Olssen, 1997). Almost all midwives were employed and practised within a hospital setting. This left only about 50, predominantly self-employed midwives, representing 3.3% of the active midwifery workforce (Guilliland, 1998), to provide home

[1] Judging by reports of progress outlined the 'Maternity Services' sections of MIDIRS Midwifery Digest publications (1993-99)

birth services around the country. Births were becoming more centralised within the main secondary and tertiary hospitals. Most midwives had lost the skills of providing care through the continuum of antenatal, labour, birth and the postnatal period (Tully, 1999), but these skills remained in small community maternity hospitals (facilities), that were located mainly in rural and provincial towns.

TABLE 1. COMPARISON OF MIDWIFERY WORKFORCE 1990 WITH 2000

	1990	**2000**
Self-employed midwives[2 3]	64	618
Total practising midwives[4]	1512	2007
% self-employed	4.2%	31%
Midwife to births ratio	60134 births (1:40 mw/birth)	56024 births (1:28)

Within the ten years following the Nurses Amendment Act (1990) there were remarkable changes to midwifery:

Five 'direct entry' and four postgraduate midwifery programmes had been established across the country,

Over 30% of the active midwifery workforce had chosen to become self-employed (New Zealand Health Information Service, 2001),

Almost half of the total midwifery workforce was providing community-based continuity of care for pregnant women (New Zealand Health Information Service, 2001),

More than 70% of childbearing women had a midwife as her Lead Maternity Carer (LMC) (MOH, 2001).

The payment schedule for publicly funded maternity services provided by practitioners was also altered substantially (MOH, 2000) by this legislation and specifications for the provision of services within the hospitals were developed to match the type of services midwives were providing (MOH, 2000). These activities saw an increase in the midwifery workforce by over 40%, to a ratio of one active midwife to 28 births (see Table 1). Over time, these changes became symbiotic, cumulatively impacting on the overall organisation of maternity care in the country into the new millennium.

One change that was not evident, however, was the anticipated retreat of women and midwives from birthing in high-level obstetric hospitals back to their communities to birth locally, either at home or in a primary maternity facility. Women continued to birth

[2]Guilliland, 1998:49.
[3]NZ College of Midwives membership information.
[4]NZHIS data from Nursing Council practicing certificates.

away from their community, favouring birth in a high technology environment. By 1999, only 11.5% of women birthed in low level birthing facilities (with no obstetric presence or back-up) and an estimated 7.2 % birthed at home (MOH, 2001). At this time about 80% of New Zealand births occurred in secondary or tertiary birthing facilities (MOH, 2001) with 24-hour obstetric cover and caesarean section facilities.

My involvement in midwifery in the early 1990s, with colleagues through the New Zealand College of Midwives (NZCOM), was focused on efforts to increase the autonomy of midwives over choices of practice setting. At the time I, along with many colleagues, believed that the 1990 legislation would enable a more socially orientated perspective on decision-making around choice of birth place and would also enable the demedicalisation of midwifery, reversing a trend that had been building up over the past 50 years (Donely, 1998).

It was not until I took over the management of a community birthing facility and midwifery service in 1994 that I consciously recognised, that despite profound legislative, payment and practitioner changes, the shift to birthing in obstetric hospitals was continuing. Colleagues managing similar services at the time reported a similar trend (communication through the NZ Maternity Manager's network 1994-1996). Because of the competitive business environment in the New Zealand health sector at the time (Blank, 1994), actual facility birth numbers were considered 'commercially sensitive', therefore national trends were not being monitored. The first record of birthing volumes by facility appeared in 2001, based on the 1999 births in the country (see Table 2 below).

TABLE 2. BIRTH SETTINGS IN NEW ZEALAND IN 1999.

	1999 (MOH, 2001)	
Birth settings	**Volumes**	**Percent**
Births in Tertiary facilities	23093	41.08
Births in secondary facilities	22617	40.23
Births in primary facilities	6422	11.43
Estimated home births	4079	7.26
Total	56211	100

In 1999, the opportunity to embark on a professional doctorate, allowed me to commence a systematic exploration of a range of issues that I believed impacted on

the development of maternity services by midwives, particularly those centred around primary community-based birthing facilities. These facilities, the remnants of the 'General Practitioner' units, were mainly located within rural and provincial towns and did not provide anaesthetic, surgical or obstetric medical services. In 1999, there were still 54 of these facilities remaining in the country, 20 of these in the South Island (MOH, 2001) where I have lived all my life and practised as a midwife.

Of particular interest to me was the extent to which midwives practicing in these facilities, had translated the changes in legislation and funding, at their local community level. This included the degree to which they had maximised their scope of practice and adapted their services to meet the needs of self-employed midwives and local birthing women. A major concern, shared by colleagues at the time, was the risk of closure faced by these facilities if they remained under-utilised because of the progressive concentration of birth in secondary and tertiary facilities. There was a general belief that once gone, these small facilities would be lost forever.

The overall aim of this professional doctorate therefore became to provide an analysis of the nature and context of contemporary maternity services in New Zealand in order to develop a multifaceted approach to securing midwifery as the key health profession involved in the development and provision of maternity services to the women of New Zealand.

Part One, of the portfolio, **The socio-political context of midwifery in the contemporary New Zealand health system**, focuses on setting the scene for the doctoral portfolio. The socio-political context of midwifery in New Zealand is analysed historically up to and beyond the 1990 Amendment to the Nurses Act (1977). This necessitated revisiting the turbulent times of the 1980s and 1990s in the health sector through the writing of various commentators (Guilliland, 1998; Pairman, 1998; Donely, 1998) and policy documents. I was part of the health sector as a midwife at the time, but not aware of the significance history would give this period. I also discovered that people remember aspects of the experience differently and place different levels of importance on specific events. This revisiting process led to some heated discussion with colleagues over my analysis and interpretation of events and their significance retrospectively. Providing a socio-political critique of the development of midwifery in New Zealand to the present day, enabled exploration of co-existing social and political events that seemed significant in enabling midwifery to make its successful claim to the unsupervised, publicly funded provision of maternity care to women in this country. My

perception of the fragility of our continued position in the health sector was also heightened during the process of analysing these events.

Following completion of this section, I developed a paper for publication in the New Zealand College of Midwives Journal called *Riding the waves of change: the development of modern midwifery within the New Zealand health sector* (Hendry, 2001). I also incorporated some of the findings within the postgraduate midwifery courses that I taught. These insights contributed to my work with NZCOM to develop strategies and mechanisms for strengthening midwifery services and the profession. Some of these activities also led to other components of this doctorate.

Part Two, Complexity theory; emergence of a theoretical framework to assist in understanding organisational change within New Zealand maternity services. This details my exploration of a theoretical framework for use in guiding the development and process of the doctorate. Complexity theory (Waldrop, 1992; Campbell-Hunt, 1999; Byrne, 1998;Cilliers, 1998), relatively new to social and health sciences at the time I began my doctorate, seemed to have a resonance with my perception of the characteristics of the New Zealand healthcare system and the place of midwifery within it. Through analysis of literature on complexity theory and its forerunner, chaos theory, I developed a theoretical framework consisting of key principles that consistently seemed to define and describe the nature of complex systems. These principles were then applied to guide the process of further developing my inquiry. They have also guided me in my professional and personal life. They give me a sense of comfort by helping to explain the context of turbulence and unpredicted change.

Part Three, followed on from exploration and analysis of the complexity theory, which had provided me with a new perspective on the organisation of midwifery services. This necessitated the development of a mechanism for analysis of the services, congruent with the principles of complexity theory. Serendipitously, I was also involved in teaching a postgraduate masters programme, focusing on the logistics of midwifery service provision. I had begun developing a method to assist students, who were experienced midwives, to analyse the various roles they occupied within their local maternity service. **Developing methodology: the emergence of contextual scanning as a tool for organisational analysis** outlines this process of exploration and describes the scanning tool and its application, highlighting the profound influence 'context of practice' has on determining the type of service offered and its location. This method used by students, opened up an unexpectedly broad range of different practice patterns, particularly

between groups of midwives within different areas of the city or region. It became very clear that there were a number of complex factors that influenced the organisation of midwifery care, not just the practice style of the midwife, or even women's choices. The process of building a multidimensional picture of midwives' practice 'systems' within their geo-social and political context became further developed into what I describe as 'contextual scanning'. This part of the portfolio, therefore, describes the development of contextual scanning as a method of gathering data and analysis to inform subsequent sections of the portfolio.

Part Four, of the portfolio explains the formalising of the scan process developed as an educational tool originally, into one shaped more specifically to contextualise midwifery practice within specific communities. Following ethical approval, contextual scans were applied to nine rural maternity services. **The development of rural midwifery services in the South Island of New Zealand: midwifery in transition**, presents the results of this process. The initial focus of the scans was to locate and explain the organisation of the midwives' maternity services within these local community settings. A consequential outcome of this process was to raise the awareness of midwives to the potential vulnerability of their services. This subsequently enabled participating midwives to identify key areas of risk and develop strategies to consolidate their services against future threats of closure. These have been incorporated within this section. The contextual scanning process allowed the midwives to view their service from a number of angles. Previously they had believed it was sufficient to focus on providing a good service to each individual woman and if this were done, their service would continue. The scanning process gave them a more comprehensive picture of their service and its interconnectedness (or not) with the community as a whole and how it was linked to policy and funding processes. I was also involved in working with these midwives to identify actions, which would make their services more sustainable in times of rapid change.

Part Five, Optimising midwifery leadership potential within the current New Zealand Maternity health service. This section was developed following analysis of the findings presented in Part Four, which seemed to indicate the need for strong midwifery leadership at regional level. A review of literature, both local and international, focusing on leadership, particularly within health services, was undertaken. This culminated in the development of leadership profiles, which provided a conceptual guide for further development in a postgraduate midwifery course focusing on leadership development.

At the time that I was also asked to join a multidisciplinary health research team investigating clinical leadership within hospitals and primary care provider organisations and subsequently co-authored three documents for the Ministry of Health that reviewed clinical leadership and clinical governance (Malcolm, Wright, Barnett and Hendry, 2001, a, b & c) in New Zealand. This networking led to my election onto the Board of a national multidisciplinary organisation called the Clinical Leaders Association of New Zealand (CLANZ). These opportunities exposed me to a variety of experiences including working in collaboration with senior medical researchers and clinicians. The national networking achieved in data-gathering for the clinical leadership projects, enabled me to become unusually well informed about the make-up of health care organisations and processes used to prioritise and manage health service funding. These insights have helped inform the work presented in Part Five.

Part Six focuses on investigation of key threats to the continued autonomy of midwifery in New Zealand. This section, **Clinical governance: what does it mean for midwives?** emerged out of my involvement in a collaborative study on clinical leadership in New Zealand health services. Compilation of a key literature review on international quality improvement strategies in healthcare (Malcolm et al., 2001a) to inform the study, alerted me to the risks of clinical governance in supporting the consolidation of medical power within publicly funded health services. These initiatives could potentially dissipate the national solidarity of midwifery through focusing on multidisciplinary professional development around regional health services. Exploration of these issues led me to work with the New Zealand College of Midwives (NZCOM) on reconfiguring their infrastructure to support the organisation and maintain strength nationally. This process also included articulating and promoting the quality improvement processes NZCOM had already had in place, benchmarking these developments against the concepts of clinical governance and making these public. This part of the portfolio takes another look at the 'big picture' of health services in New Zealand. In this section an organisational analysis of the health care system is conducted with a particular focus on the risks of clinical governance in maintaining (or regaining) medical dominance in decision-making over health resources. Strategies necessary for midwifery to mitigate this risk are also discussed.

Part Seven concludes this doctoral portfolio. **Unfinished business: strategies for future-proofing midwifery in Aotearoa/New Zealand**, reviews activities undertaken by the midwives in New Zealand collectively, through their professional college, to strengthen their position in a rapidly changing health service environment. The findings of the scan

in Part Four, combined with the move towards complete devolution of health services to regional level, prompted me to analyse the strategies developed by the College to meet these challenges. The principles of complexity theory developed in Part Two were used as a framework to analyse the mechanisms and potential of these strategies in managing risks that threatened the position of midwives and midwifery established over the previous decade.

REFERENCES

Beal, R. (2000). Competing effectively: environmental scanning, competitive strategy and organisational performance in small manufacturing firms. *Journal of Small Business Managemen, 38* (1) 27-47

Blank, R. (1994). New Zealand health policy: a comparative study. *Oxford Readings in New Zealand Politics.* Auckland: Oxford University Press.

Boehem, A., & Litwin, H. (1999). Measuring rational and organisational-political planning activities of community organisation workers. *Journal of community practice, 6*(4), 17-35.

Bryne, D. (1998). *Complexity theory and the social sciences: An introduction.* London: Routledge.

Campbell, R., & Garcia, J. (1997). *The organisation of maternity care: A guide to evaluation.* GB: Hockland & Hockland.

Campbell-Hunt, C. (1998) Complexity: A theory of everything for strategy and strategising? *New Zealand Strategic Management, Spring,* 34-38.

Cilliers, P. (1998) *Complexity and postmodernism: Understanding complex systems.* London: Routledge.

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

Guilliland, K. (1998). *A Demographic profile of independent (self-employed) midwives in New Zealand Aotearoa.* Thesis for Masters of Arts in midwifery. Victoria University. Wellington, New Zealand.

Hatch, T., & Pearson, T. (1998) Using environmental scans in educational needs assessment. *Journal of Continuing Education in the Health Professions, 18*(3), 179-184.

Health Funding Authority. (2000). *Maternity services: A reference document.* Wellington, NZ: NZ Government.

Health Funding Authority. (1998). *Notice issued pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, NZ: NZ Government.

Hendry, C. (1997). *Comparison between consumers' and providers' perceptions of indicators of quality maternity hospital care.* Masters of Public Health Thesis, Otago University, Dunedin, NZ..

Hendry, C. (2001). Riding the waves of change: The development of modern midwifery within the New Zealand health sector. *New Zealand College of Midwives Journal, 25*, 10-15.

Malcolm, L., Wright, L., Barnett, P., & Hendry, C. (2001a). *Clinical leadership and quality in District Health Boards in New Zealand.* Wellington, NZ: MOH.

Malcolm, L., Wright, L., Barnett, P., & Hendry, C. (2001b). *Clinical leadership and quality in primary care organisations.* Wellington, NZ: MOH.

Ministry of Health. (2001). *Report on Maternity 1999.* Wellington, NZ: MOH.

Ministry of Health. (2002. *Maternity Services: Notice pursuant to Section 88 of the Public Health and Disability Act 2000.* Wellington, NZ: MOH.

Ministry of Health. (2003). *Report on Maternity; 2000 & 2001.* Wellington, NZ: MOH.

New Zealand Government. (1990). *Nurses Amendment Act.* Wellington, NZ: NZ Government.

New Zealand Health Information Services. (2001). Retrieved from: www.nzhis.govt.nz/stats/nursestats.html

Pairman, S. (1998). *The midwifery partnership: An exploration of the midwife/woman relationship.* Thesis for Masters of Arts in midwifery. Victoria University, Wellington, NZ.

Papps, E., & Olssen, D. (1997). *Doctoring childbirth and regulating midwifery in New Zealand.* Palmerston North, NZ: The Dunmore Press.

Tully, E. (1999). *Doing professionalism 'differently': Negotiating midwifery autonomy in Aotearoa/New Zealand.* PhD Thesis, Canterbury University, Christchurch, NZ.

Waldrop, M. (1992). *Complexity: The emerging science at the edge of order and chaos.* UK: Simon & Schuster.

Wright, L., Malcolm, L., Barnett, P., & Hendry, C. (2001c). *Clinical leadership and clinical governance: a review of developments in New Zealand and internationally.* Unpublished paper commissioned by NZMOH, Wellington.

Part One:

THE CONTEXT OF MIDWIFERY IN THE CONTEMPORARY NEW ZEALAND HEALTH SYSTEM: AN HISTORICAL SOCIAL POLICY OVERVIEW

CONTEXT

This paper formed the starting point in my doctoral journey. At the time of writing this paper originally, in 1999[1], I was working as a university lecturer and had carried out a review of the postgraduate midwifery component of a combined nursing and midwifery masters programme. I had also started auditing undergraduate education programmes for the Nursing Council of New Zealand. Both of these activities exposed me to nursing and midwifery educators and practitioners throughout the country. Within two years I completed 23 separate audits of educational programmes. These included site visits to the health services where students gained clinical experience. I was fascinated, at the time, by the differing levels of understanding nurses had of the distinction between nursing and midwifery. Some still did not know that midwives could practice in New Zealand without medical supervision. Many continued to teach 'obstetrics' within their nursing curriculum and complained that practical learning opportunities for their nursing students within maternity settings were limited by the presence and preference given to student midwives.

Through membership of NZCOM and constant networking with midwifery colleagues, I had developed a 'taken for grantedness' about the distinction between nursing and midwifery which had been articulated at Nursing Council level and within health legislation (HFA, 1996). Taken out of that exclusive maternity environment by my consultancy work, it became clear to me that nurses had difficulty grasping both the rationale and the practicalities of the distinction between the professions. This, to me, represented a continued risk to the promotion of midwifery as a separate profession within the generic health service. Neither nurses nor health managers had been exposed to the same developmental process of separation that midwives had experienced within both the maternity services and midwifery education. This sparked an interest in the systematic revisiting of the professional and clinical separation between nursing and midwifery in New Zealand, which I had lived through over the

[1] Where possible in the paper, I have updated relevant statistics and included more recent references.

previous ten years. It seemed to me, at the time, that potentially one of the greatest risks to midwifery autonomy lay at the intersection of nursing and midwifery. This intersection appeared most vulnerable within the institutional setting where nurses and midwives shared a working environment. I decided the background to this issue required a thorough analysis.

Over the past ten years, inpatient maternity services had increasingly been absorbed within main hospital services. By 1999, four of the country's six tertiary maternity facilities had moved into the acute tertiary general hospital with the other two having plans to do the same (Author's knowledge of the services) by 2004. These six facilities accounted for forty one percent of all births in the country. Another forty percent of births occurred in provincial hospitals, all of which have their maternity facility incorporated within their general hospital (MOH, 2001). Most of the primary rural birthing facilities are also housed within local general hospitals and most of these are managed by a nurse. This means that less than five percent of births in the country occur in a low technology 'stand alone' maternity facility. An estimated seven percent of births in 1999 occurred in the home (MOH, 2001).

Over eighty percent of births in New Zealand occur within facilities where midwives and nurses work in close proximity. These mixed (maternity and medical/surgical) bed hospitals generally have nurses as senior managers in roles such as a Director of Nursing or Nurse Manager. Commonly the Director of Nursing or Nurse Manager also had jurisdiction over employed midwives (Wright et al., 2001). They would also have final approval over policies and procedures that influence midwifery practice. What follows, therefore, is a socio-political analysis of the journey taken by the midwifery profession in New Zealand over the latter part of the twentieth and early twenty-first century with a critique of the contemporary health service environment, in particular, the relationships between midwives and other professions.

INTRODUCTION

In 1990, midwives in New Zealand gained the legal right to practice independently from medical practitioners through an amendment to the New Zealand (NZ) Nurses Act (1977). This Act enabled registered midwives to provide care for childbearing women without the supervision of a doctor or midwife who was also a registered nurse. The legislative change also gave midwives access to the same public maternity funding as general practitioners and the same hospital visiting privileges and prescribing rights. In

the years following these changes, however, hospitals remained the main birthing venue for women with their midwives. In 1999, at least 94% of births in New Zealand took place within a hospital setting (MOH, 2001).

Even though midwives and women continued to opt for hospital births, the Nurses Amendment Act (1990) had altered the relationships between midwives and those providing hospital services. This Act (1990) gave midwives the choice of working as self-employed health professionals with formalised access to maternity hospitals in the same way as general practitioners and obstetricians (Tully, 2001). Midwives became consumers of hospital services, as hospitals were paid a facility price per birth. Employed midwives also became attractive to employers who saw their potential to increase revenue through accessing the same fee-for-service income available to self-employed midwives. In both cases midwives remained dependent on maternity hospitals to both earn an income and provide a venue for their service to women. The ramifications of developing these interdependent relationships, overlaid by the subsequent 'health reforms', stimulated a roller-coaster ride of change in institutional hospital-based maternity services which continues to the present day.

To background these changes, examination and analysis of the philosophical and practical determinants of social policy will be used to position midwifery within the contemporary New Zealand health service environment. The legislative and policy 'signposts' following the establishment of the welfare state in 1938 provide a framework for investigating the emergent midwifery profession in this country and its relationship with hospital-based services.

Social policy within the context of this paper refers to:

> *the actions that affect the well-being of members of society through shaping the distribution of, and access to, goods and resources (Cheyenne, O'Brien & Belgrade, 1997p3).*

This broad definition serves to illustrate the potential of social policy to impact on the lives of every citizen. In New Zealand, political power is centralised within a national parliament, which has no upper house, enabling the government to make more rapid and comprehensive policy changes (Blank, 1994) than other similar western nations. The midwifery profession and the service midwives provide for women are, as other publicly funded services, ultimately dependent on the philosophy underpinning the social policy direction of the ruling political party. This country has a long history of government-subsidised health care (Blank, 1994). Consequently, midwives are

dependent on the government for their income, even those who are self-employed. Their payment schedule is laid out in legislation including a rider that they are not entitled to charge a private fee while accessing this public funding. Only LMC obstetricians are entitled to claim on Section 51 (1996) and charge a co-payment to women.

The key objectives of this paper are to map out the socio-political events that influenced the context of midwifery and maternity hospital services leading up to and following the 1990 legislative changes which enabled midwives to practice without medical supervision and more importantly access funding for their services independent of an employer. This will include an overview of the adaptive strategies used by the midwifery profession and other agents involved in the development of maternity services following the legislation, to maximise their authority. Threats to the continued, relatively recent, autonomy of the midwifery profession within this system at that time will also be identified.

IMPACT OF THE ECONOMIC ENVIRONMENT ON SOCIAL POLICY DEVELOPMENT

To understand New Zealand's maternity services in the 1990s and 2000s, it is necessary to reflect on the social policy initiatives and influences that shaped their development. The role of the state in health care funding in New Zealand was laid out in the 1938 Social Securities Act (Fougere, 1992). Maternity services were clearly included within 'Health Services' from this point on. This Act provided a backdrop for the development of a comprehensive social welfare system and a future direction for social policy in the years to come (Cheyenne et al., 1997). More specifically it shaped the expectation of access to health care, which persists to the present day, namely, that it should be:

- universally available regardless of personal economic status,
- easily accessible,
- responsive to consumer demand,
- based around Medical Practitioners as ideal agents for the consumer (Abel, 1997).

When placed within an international context, the strength of New Zealand's welfare state appeared to mirror the strength of the Labour movement within industrialised countries of the day. When the Labour movement was strong, government intervention flourished, as did welfare state initiatives. The primary focus of social policy through legislative reform from the advent of the welfare state through to the 1970s was on

production rather than distribution. During this period, while Australia opted for insurance based public health care remuneration, New Zealand chose to continue providing direct funding, hence the ease with which the government of the day could manipulate health service provision. This was achieved by tagging the funding, adjusting the distribution both nationally and regionally and altering the total amount available at each annual budget. Legislative changes also enabled services, initially identified as 'Vote: Health', to be transferred to another budget, e.g. education or social welfare [1]. The egalitarianism of 'industrial democracy' (Navarro, 1989) experienced during this time by most industrialised nations including New Zealand, lead to increased health policies and health planning by governments striving towards increasing the universalism and comprehensiveness of health services (Navarro, 1989).

A change in thinking was heralded by a 1973 Royal Commission on Social Security in New Zealand, which articulated the need to develop greater community responsibility. The development of a shift from total state responsibility for welfare was called for. Some form of means testing for entitlement was suggested (Abel, 1997). To place this change in thinking within an international context, 1973 saw the United Kingdom join the European Economic Community, which meant that overnight, New Zealand lost its major export market. The repercussions of this for New Zealand were potentially catastrophic and seriously threatened the economic stability of the country. Revisionist economic policy was initiated with great intent from this point on. Health spending represented a large portion of government expenditure. A 'White Paper' on health, 'A Health Service for New Zealand' (1974), was hurriedly commissioned by the then Labour Government. This unpopular document, predictably called for a rationalisation of health services in the light of the economic crisis, but there was a change of government the following year and the key tenets were not seriously taken up until ten years later (Cheyenne et al., 1997).

By the 1980s, a strong reaction to non-means tested social expenditure was emerging from a strengthening fiscally focused movement within industrial and commercial sectors (Boston, Dalzeil & St John, 1999). Faced with the cost of increased dependence on social welfare, bolstered by growing unemployment in the face of

[1] A good example of this was the transfer of midwifery education from hospitals (vote:health) to educational institutions (vote:education) this involved the estimated costs of this education being taken out of the health budget and put into the education budget. The true cost of the workload carried by the students was underestimated (author's knowledge as part of the 'unbundling of costs' exercise).

depressed economic growth in New Zealand, the Business Round Table and Treasury pushed for a more 'targeted/residualist' social policy regime (Boston, 1992). Interestingly, most of this change occurred during the term of a Labour Government (1984-1990). Labour's response to the dilemma of reliance on corporate co-operation both nationally and internationally, bearing in mind their working class origins and support, was to initiate moves to reduce the tax burden on all individuals, regardless of their income, and increase the indirect tax take. They introduced a Goods and Services Tax (GST). This move has recently been described as a predicTable response by a Labour Government caught with a form of cognitive dissonance; their attempt to 'civilise capitalism' (Latham, 1998). The rationale justified targeting welfare support for low-income groups leaving the wealthy with more 'cash in hand' to spend meeting their own needs. The GST attached to the spending was designed to negate the loss of government income suffered by lowering the personal tax rate. In reality, income inequity was increased while potential government revenue was reduced (Boston, 1992; Cheyenne et al., 1997).

In 1990, when the National Government came into power, the budget deficit and overseas debt was so great that immediate measures were set in place as part of an attempt to curb welfare spending (Boston et al., 1999). Social policy at this stage was redirected towards shifting responsibility onto the individual and was based on the concepts of :

- fairness - those in genuine need get adequate government assistance,
- self reliance - policies should increase incentives for individuals to care for themselves,
- efficiency - the highest value from the tax dollar,
- and greater personal choice - encouraging alternative (rather than the state) providers (adapted from Boston, 1992).

It was within this philosophical framework that the development of 'managed competition' (Cheyenne et al., 1997p227) as a model for the health service in New Zealand was justified. Maternity services provide a very clear demonstration of this model in action. This quasi-market model, involved initiation and support for competition between health care providers over limited tenure service contracts. The role of the state was distanced from directly funding specific services, through the development of specific organisations to take on the role of consumers' agent by deciding what will be purchased and the cost. These organisations, the Health Funding Authorities, negotiated directly with providers for their services.

The Impact of Social Policy on Health

Repercussions of the shift in focus from institutional to individual responsibility in social policy that had begun to emerge in the 1970s were reflected in the subsequent development of social services including health. Abel (1997), in her analysis of precursors to the 1990 (NZ) Nurses Amendment Act, identified the emergence of 'deprofessionalisation' (1997p34), meaning the combination of self-help strategies and the emergence of alternative health providers which she took as a significant signal of the waning of medical power.

The feminist movement, growing in momentum during the same period, drew attention to issues of gender imbalance, so it seemed only a matter of time before the patriarchal dominance of the traditional professions, particularly medicine, would be put under the spot light. The increase in lay knowledge, the growing dependence on technology and the delegation of tasks to allied personnel including technologists, specialist 'sub professions' [2] and managers, enabled slippage in control from professionals such as doctors, particularly within the institutions.

The Context of Midwifery

During this time, midwifery in New Zealand had literally and practically been subsumed within nursing by a new Nurses Act (1977) which implicitly defined midwifery as 'obstetric nursing' (Pairman, 1998). The philosophy supporting this move underpinned the acceptance of institutionalised childbearing and the 'technical assistant' role (Donley, 1998) expected of the midwife/nurse in the running of an efficient maternity hospital.

Midwifery education was still being run on an apprenticeship model in tertiary maternity hospitals, with students being relied on to carry out the bulk of the 'work'. Midwifery education was very much hospital focused and compartmentalised into antenatal, labour and postnatal modules. There were three midwifery training programmes available in the country during the 1970s and 1980s. Students were not generally exposed to the experience of maternity care in the community or even care within the numerous primary maternity units functioning at the time (experience as a student then midwife at the time). When midwifery 'training' moved from hospitals to the Advanced Nursing Courses within educational facilities in 1980, an acute shortage

[2] Within this context I am referring to nursing, midwifery, physiotherapy, occupational therapists and social workers as sub-professions, as they would be viewed in this paradigm by traditional professions such as medicine and law.

of midwives in maternity hospitals was felt, (e.g. at Christchurch Womens Hospital, this move took 30 students off shift work and out of the hospital) justifying an 'obstetric nursing' role for the registered nurse to bridge the gap.

The subsequent dearth of midwives over the following ten years in most practice settings, not only facilitated the closure of small, particularly rural, maternity facilities, but curtailed womens' option to home birth. Registered nurses were not willing to practice 'obstetric nursing' outside the confines of a main hospital (author's experience as a midwife in Christchurch Womens Hospital in 1980s). In 1990, only 3.3% of active registered midwives were practising in the community (Guilliland, 1998).

The 1980s witnessed the gradual technocratisation of health policy advice, caused by a move from clinical to technical and managerially focused government advisors (Cheyenne et al., 1997). This was viewed as instrumental in the deskilling of the non-medical workforce in maternity services (Donley, 1986), caused by the multitasking of nurses and midwives, leading to an inherent dissipation of their specialist skill base. As a consequence of these efficiency drives, 'costly' student intensive apprenticeship registration programmes for nurses and midwives were abolished and the concept of a generic 'comprehensive' nurse educated in polytechnics was promoted. Guilliland (1998:50) describes the skilled midwifery workforce as being at 'its lowest ebb' (Guilliland, 1998) by the mid 1980s.

Few nurses gained midwifery registration during the 1980's when midwifery was incorporated into part of a one-year post-registration nursing course (Guilliland, 1998). For example, the hospital-based 'training' in Christchurch during the 1970s until its demise in 1979, 'trained' forty to fifty registered nurses and some obstetric nurses (who became the equivalent of direct entry midwives), per year. The Advanced Diploma in Nursing course (one year) which offered Midwifery as a 'special topic' resulted in 6-8 midwifery registrations per year in Christchurch by the end of the 1980s (personal knowledge as the midwifery lecturer in this course at the time).

Economic Rationalisation and Devolution of Health Services

In 1983, rationalisation of health services were initiated by the Area Health Boards Act (1983). Over the following six years, a previously centralised, and seemingly inefficient, public health service was devolved into 14 regional Area Health Boards. Funding became population based and capped, while the Ministry of Health was downsized with many of its previous functions regionalised. The decentralisation of health funding

enabled greater local influence over spending allocation and health initiatives (Boston, Dalziel & St John, 1999). The majority of the board members were voted in during local body elections, enabling a midwife, Karen Guilliland, to obtain a seat on the Canterbury Area Health Board (Guilliland, 1998). This democratisation of health service development provided midwifery and women with valuable exposure to the politics of health care provision and its associated networking. Significantly General Practitioner (GP) funding still remained centralised and uncapped (Abel, 1997). This factor was also later to assist midwifery in obtaining access to maternity service funding in its own right.

The context in which this reshaping of health service occurred included a change of government from National to Labour in 1984. The three-year political cycle of elections in New Zealand generally ensured that the threat or actual implementation of economically or socially threatening legislation preceded a change of government. The new government generally promises a change in direction. Unpredictably, Labour continued with the neo-liberal reform started by the previous National administration. There was a focus on facilitating market forces by reducing state intervention. This international trend supported the notion that

> *anything beyond a minimalist welfare state undermines liberty, is inequitable, crowds out the private institutions of a civil society, weakens personal incentives and is economically damaging* (Boston et al., 1999pvi)

In line with this philosophy, Treasury briefings on health services to the incoming Labour government recommended 'user part' charges (where the consumers were expected to 'top-up' the full costs), a funder:provider split, competition between providers, a greater emphasis on community care and greater targeting of services (Boston et al., 1999).

In 1986 a Health Benefits Review produced a report entitled 'Choices For Health Care' (Cheyenne et al., 1997) which rationalised the philosophical underpinnings of the health policy development. The medical profession endorsed the policy provided that it enabled them to charge a fee (privately) independent of the General Medical Subsidy (GMS) (Cheyenne et al., 1997). It is widely thought that the unpopularity of the report and the risk of loosing power through the introduction of such far reaching change in health service delivery, meant the country was to wait six years and a change of government before the policy was implemented. This policy framework underpinned the 1992-94 health reforms. The economic 'fall out' from the share market crash in 1987 and a growing frustration experienced by health administrators and service

managers with the obstructive behaviour of doctors facilitated a sense of inevitability in the need to change the way health services were being run (Boston et al., 1999).

POLICY IMPACTS ON MIDWIFERY: A PROFESSION IN CRISIS

In 1983, an amendment to the Nurses Act (1977) had enabled registered nurses who were not midwives to care for childbearing women. The midwifery workforce crisis had clearly had an impact on health policy development. It seemed most expedient to allow registered nurses more flexibility than to fast track the redevelopment of midwifery education programmes. An unintended by-product of the 1983 amendment was to exclude a small but significant group of 'direct entry' midwives from being in charge of a maternity hospital or carrying out home births. The requirement to be a registered nurse to carry out 'obstetric nursing' cut this unique (at the time) practitioner out of practice in settings where a registered nurse could not supervise them. Donley (1998) believes that these moves were actually intentional, to placate the doctors who were requesting more centralised birthing services within institutions to better meet their training needs. Women's choices over both provider and birthplace were literally reduced overnight.

This legislation was seen by many as a turning point in the re-emergence of midwifery as a profession separate from nursing (Donley, 1998; Pairman, 1998; Abel, 1997). The 'Save the Midwives' consumer group was formed the same year. This group consisted mainly of women who had given birth at home with a midwife in attendance and were committed to supporting the future of home birth.

Midwives also felt a growing unease in their relationship with the New Zealand Nurses Association (NZNA, later to become the New Zealand Nurses Organisation, NZNO), which represented their official professional voice at this time, who had appeared to let the 1983 legislation pass uncontested. This led to a strengthening of the Midwives Section of the organisation culminating in a vote of 'no confidence' in the Association being put forward by midwives in 1984. The increasing profile of midwifery within the NZNA was demonstrated at the organisation's conference the following year when a remit supporting a separate midwifery education programme was passed and the International College of Midwives definition of a midwife was formally accepted. By 1987, the NZNA Policy Statement on 'Maternal and Infant Nursing' was rewritten to include the concepts of continuity, treaty principles[3], including partnership, midwifery

[3] These principles include: participation, partnership and protection of the people of the land (Maori).

autonomy and preferential employment of midwives in maternity settings (Donley, 1998).

An increase in births during the 1985-90 period (Guilliland, 1998), which highlighted the impact of a reduced midwifery workforce[4], enhanced the argument for a midwifery specific education, but it was not until 1989 that 'stand alone' (from nursing) midwifery courses for registered nurses were established. These one-year full-time polytechnic-based courses were offered to registered nurses in four centres throughout the country and attracted large numbers of applicants. In Christchurch the first course, offered in 1991, attracted 120 applicants for 14 places (author's personal experience as Course Supervisor). This dramatic increase in applicants for the one-year courses appeared to attract nurses to midwifery as a profession, rather than as a nursing specialty.

This period also saw consumer health groups, which had emerged out of the women's movement in the 60s and 70s, experience a watershed in 1988 with the 'Cartwright Inquiry' (Abel, 1997). This judicial inquiry, called by the government of the day, prompted by the mass media, centred on a medical research programme involving the treatment/non treatment of women with pre-cancerous cervical lesions. Women were not informed they were being involved in research and their consent had not been obtained. The attitude of the doctors during the investigation and their response to the outcomes, dealt a public blow to the credibility of the medical profession, which created opportunities for both the consumer movement and for midwifery.

As a result of this Inquiry, the spotlight fell heavily onto women's health, of which childbirth issues formed a major part. That same year the midwives section of the NZNA split off into a separate entity and was inaugurated in 1989 as the NZCOM. Consumer support featured prominently in this move, the College recognising their importance by enabling them to obtain equal membership with midwives (Guilliland, 1998).

The philosophical underpinnings of NZCOM had a high level of synergy with the sentiments of the 'Discussion Paper on Care in Pregnancy and Childbirth' (1989) commissioned by the Department of Health Women's Policy Unit, which was released the same year. This document described the key tenets of optimal maternity care as:

- woman centeredness,

[4] In 1986 there was a ratio of 1 practising midwife to 53 births. By 1994 the ratio had reduced to 1:30 (Guilliland, 1998).

- providing continuity of carer across the entire childbearing experience,
- midwifery equality with doctors in maternity care (autonomy and access to funding)
- consumer choice of carer, service setting, home, community or hospital,
- recognition of midwifery as a profession in its own right (adapted from DOH, 1989).

The working party on this document had involved 15 women, of whom only five were health professionals. Two of the group were midwives. This was to mark the beginning of a number of reviews and consensus-gathering exercises attempted by government agencies of the day to develop an optimal maternity service. While the passage of the Nurses Amendment Act through parliament in 1990, was seen as a crowning achievement for midwives, it also enabled a number of social policy goals of the day to be achieved.

THE ACHIEVEMENT OF MIDWIFERY AUTONOMY

The addition of three words to the 1977 Nurses Act 'or registered midwife' in 1990, required changes to five acts and five regulations and 'had a profound effect on the scope of midwifery practice, payment and status' (Abel, 1997p106). Midwives at last had a legal mandate to provide maternity care to women in any setting without requiring medical supervision. They also gained hospital and prescribing privileges previously afforded only to doctors. This immediately presented maternity hospitals with a unique set of challenges and potential opportunities.

The environment in which the Nurses Amendment Act was passed in 1990 was complicated. There seemed to be a convergence of factors favouring midwifery as a profession in its own right. Nationally there was a growing disenchantment by female health consumers with the medical profession (Abel, 1997). The midwifery workforce shortage was becoming more severe, exacerbated by the combination of low volumes of midwives registering over the preceding years and an increasing birth rate. Professionally midwives had unified in a newly formed national College of Midwives and in the same year three 'midwifery only' post registration programmes had been established (Guilliland, 1998), making midwifery more available as a career option for nurses.

The introduction of 'The Health Goals and Targets' by the Labour government in 1990 articulated their commitment to increasing the profile of primary health care and public health, including the demedicalisation of some services such as community and

maternity (Boston et al., 1998). On a more personal level, there was a female Minister of Health, married to a Professor of Public Health. The Minister was also a long time friend of key midwifery figures and supporter of midwifery causes (Abel, 1997). The NZCOM president was also an existing Labour representative on an Area Health Board.

The Nurses Amendment Bill was passed rapidly through parliament aided by the close relationships developed between the key figures involved in supporting this legislation. Urgency in its passage was also heightened by the desire to announce its successful passage by the Minister of Health as a special guest at the first National Conference of the College of Midwives in Dunedin in August of 1990. The Bill was actually passed on 21 August 1990 and announced by the Minister at the conference the following day (Pairman, 1998).

THE RE-EMERGENCE OF MIDWIFERY INTO A CHANGING HEALTH CARE ENVIRONMENT

It is estimated that in the first year of legislated autonomy, 50 midwives were practicing independently (self-employed) and commenced claiming the Maternity Benefit to which they were now entitled (Pairman, 1998). Most of these midwives had recently been or were still currently employed by maternity hospitals. The relationship of these midwives to the facilities needed to be worked through and formed the basis of ongoing negotiation that remains to the current day. Justifiably midwives argued that if doctors could maintain public employment and privately take on clients, so could midwives.

It could be seen that these emergent signs of competition finally triggered action from the medical profession, who had been relatively 'subdued' (Abel, 1997) during the passage of the Nurses Amendment Bill. Abel (1997) contends that they 'did not anticipate the extent of the change to the midwifery scope of practice' (1997p105). Because of the intent of the legislation in granting equivalence to midwives with doctors, arrangements that had previously been made for doctors to gain maternity hospital access for the provision of their 'private' (self-employed) service, were also granted to midwives. This was despite midwives being paid with public money.

There is very little written about the impact of midwifery autonomy from the perspective of maternity hospital providers. From personal experience as a maternity service manager over this time, the competing needs of the employed midwives maintaining maternity hospital services and those of the self employed midwives with access

agreements, proved to be a constant source of tension. In reality midwives did provide a different service from doctors. This was an enhanced, more holistic service. Self-employed midwives were less likely to require the services of a hospital-employed midwife, yet self-employed doctors were entirely dependent on the hospital midwives for the bulk of care in labour, birth and the early postnatal period. Based on the intent of the legislation, which implied equal pay for equal work, many hospitals questioned the need to provide self-employed doctors with a 'free' midwifery service in the hospital. The rapid exit of midwives into independent practice, 400 by 1993 (Guilliland, 1998), estimated to be 25% of the practising midwifery workforce, exacerbated the need to clarify the role of hospital-employed midwives and the relationship between the salaried and fee-generating midwives.

A CHANGING CLIMATE IN THE HOSPITAL SETTING: THE PLACE OF MIDWIFERY

Managerialism had been officially introduced into the hospital sector in 1988 by the State Sector Act (Boston et al., 1998). This piece of legislation along with the Public Finance Act (1989) legislated for economic accountability of Health Boards, enshrined a philosophical transition from the concept of administering a service to active management in the public sector. The urgency for increased economic accountability for public spending by the government was exacerbated by fallout from the share market crash of 1987. The professionalisation of management had begun and non-medical managers were introduced to the health sector, heralded as the facilitators of economic rationalisation within the industry (Blank, 1994; Boston et al., 1998).

HEALTH SERVICE MANAGEMENT UNDER THE SPOTLIGHT

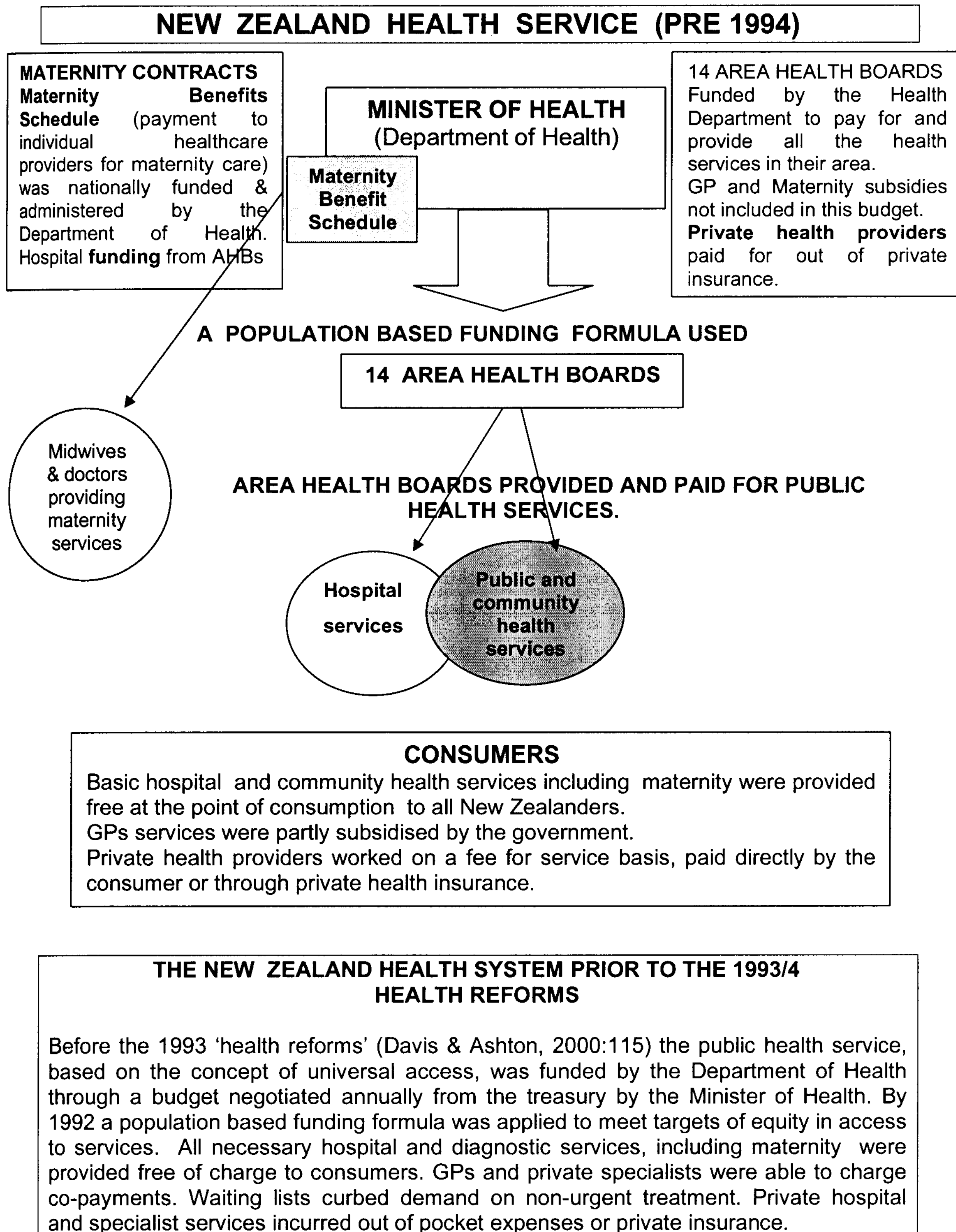
A report by the Hospitals and Related Health Services Taskforce entitled 'Unshackling the Hospitals' (Gibbs, 1988) provided a blue print for a total reorganisation of the entire public health sector. This report forecast the greatest change in the New Zealand health service since the introduction of the social welfare system in 1938 (Blank, 1994). Key features of this report included:

- the creation of Regional Health Authorities to determine local health needs,
- development of contractual service provision allowing the introduction of non-traditional providers such as voluntary, community and private agencies into public health service delivery,
- creation of a more 'company like' role for Area Health Boards, who would compete with other providers to deliver services (adapted from Blank, 1994).

The recommendations of this report were rejected by the then Labour government, in an effort to remain in power, but the advancement towards managerialism in the hospital setting was strengthened by gradual replacement of the triumvirate system of management (nurse, doctor and administrator) by managers who in effect took control of the Health Boards (Blank, 1994). These moves heralded the disestablishment of nursing hierarchies systematically around the country and the devolution of nursing budgets to departmental level Service Manages. The preoccupation of nurses with their own survival in an environment where many nursing roles and functions were being converted into management positions, enabled midwives to concentrate on 'ring-fencing' activities which would distance their profession from nursing as well.

Figure 1.1 provides an overview of health services prior to the major health reforms in 1993/4. The Area Health Boards Act of 1983 enabled, by 1989, the transition of 27 Regional Health Boards into 14 Area Health Boards (AHBs). The rationale of this was to regionalise responsibility for rationing of health spending (Blank, 1994).

Figure 1.1 New Zealand Health Service 1983 – 1994



Paving the Way for Health Reforms

A number of legislative initiatives paved the way for the introduction of the health reforms that were eventually introduced by the Health and Disability Services Act in 1993. These pieces of legislation had a direct impact on hospital-based midwifery services and illustrated the flavour of social policy advice being given to the new government. The development of a competitive environment in the maternity service sector had been introduced in 1990 with the Nurses Amendment Act. Whether or not this was a deliberate move is debatable, but it served to forewarn health services of the complications involved with the introduction of competition into the health sector as a whole.

The New Zealand Bill of Rights Act (1990) facilitated the legislation of consumer rights in health care. Consumers had to be offered choice, give informed consent for service and had the right to complain. This blunted the power of 'medical knowledge' and challenged the control of information-guiding service provision and development previously held by doctors. Henceforth they could be held accountable to consumers for their actions and advice. So too could midwives. The Consumers Guarantee Act of 1993 further advanced the power of consumers enshrining their right to the service they requested as promised. The NZ Accident Rehabilitation and Compensation (Medical Misadventure) Regulations (1992) abolished the protection of doctors (and midwives) from most forms of medical malpractice (Donley, 1998) enabling them to be sued by disenchanted consumers. This move was credited with enhancing defensive practice.

The Place of Employed Midwives

The NZ Employment Contracts Act (1992) also had an impact on midwifery. The ability of unions, in the case of hospital-employed midwives, the Nurses Association (NZNA), to collectively bargain at a national level, was lost. This meant that the NZNA had to negotiate their pay and conditions separately with each nursing and midwifery employer. Viewed positively for employed midwives, this enabled them to negotiate variances to the nurses' contract with innovative employers. They were no longer hampered by a nationally binding contract, which would be less flexibly negotiated.

The disadvantage for midwives in large hospitals revolved around the union needing to combine midwifery with nursing for economic expediency because of the increased activity involved negotiating numerous contracts all over the country. The apparent resistance of many in the Nurses Association to the philosophical support of midwifery

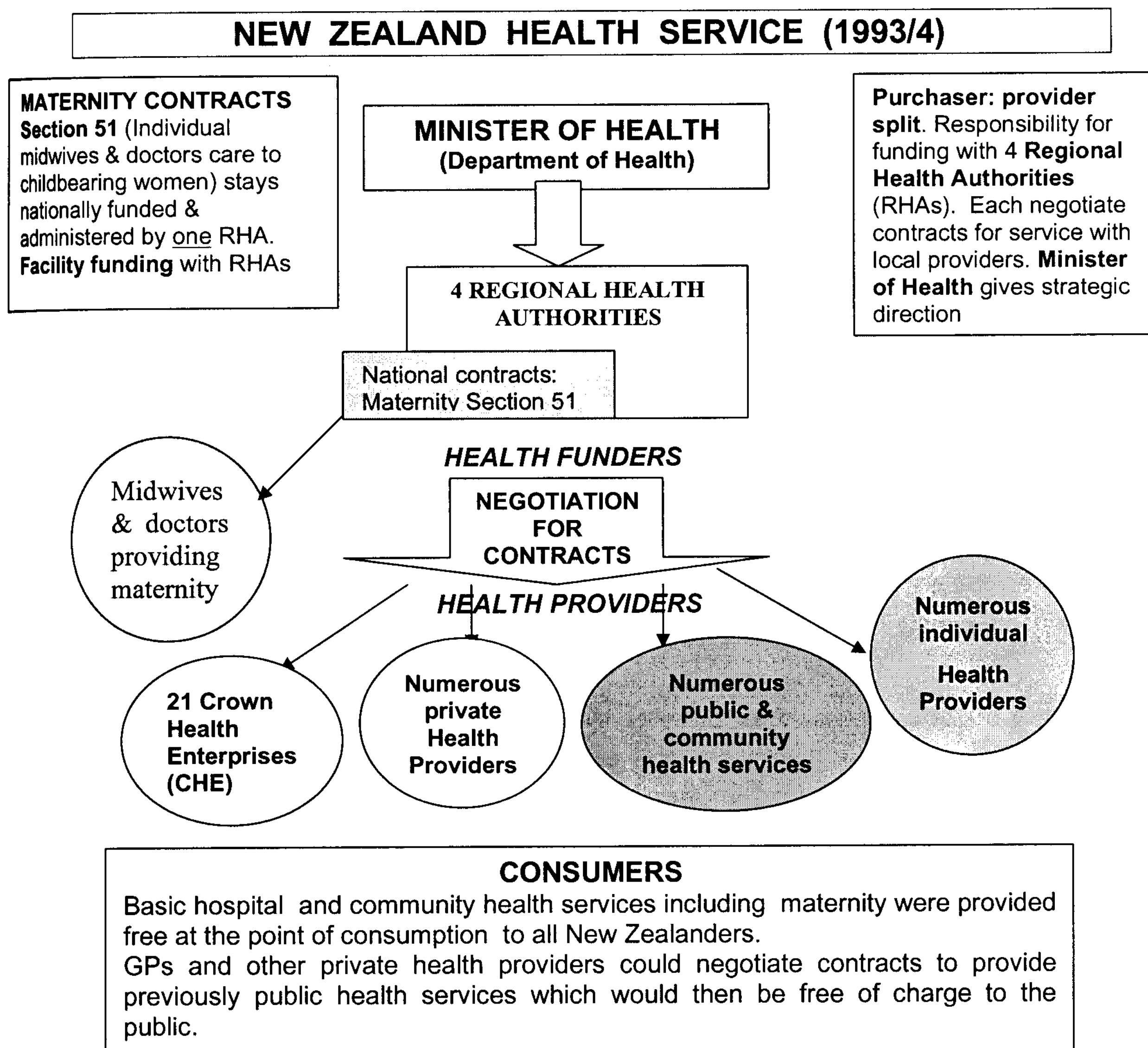
as a separate profession from nursing, seemed to obstruct the advancement of midwives employed in major maternity hospitals towards realising their potential as autonomous practitioners. This resistance was reflected in the continued pursuit of maintaining a 'midwives section' within the Nurses Organisation. Their reluctance to recognise the NZCOM as the professional voice of Midwives, was reflected in their insistence on aligning midwifery pay and conditions with that of nurses and a reticence in developing collegial relationships with the NZCOM (Donley, 1998; O'Connor, 1984).

The preoccupation of the Nurses Organisation (NZNO formerly NZNA) with the negotiation of 'contracting rounds' (most were annual) allowed the New Zealand College of Midwives to concentrate on developing professionally. These activities included the refinement of consensus processes developed to manage the College nationally, employment of a National Co-ordinator, establishment of a national headquarters, publication of standards for practice, establishment of peer review processes for self-employed midwives and establishment of degree-based direct entry midwifery programmes nationally (Pairman, 1999). All of these were achieved and functioning by 1993 when the health reforms commenced.

These activities enabled midwives to more credibly negotiate with the health funding bodies for continued parity with doctors in access and payment for maternity services. Meanwhile, all midwives employed within hospitals needed to continue membership of the NZNA to ensure industrial representation. The cost, both economically and philosophically, of belonging to both NZNA and NZCOM, meant that in many regions there was an imbalance in NZCOM membership favouring self-employed midwives.

Philosophically, it could be argued that greater involvement in the College by self-employed midwives, who had risked leaving employment to set up their own businesses unencumbered by demands of employers, enabled more radical and forward thinking developments of the profession to be undertaken. Maybe, both the desire (from a professional and commercial perspective) and ability (no obligations to an employer) of the membership to develop midwifery services to better meet the needs of consumers (and the profession), enabled previously unimaginable opportunities to develop for midwives in this country. Self-employment, enabled midwives to develop their prime relationship with the consumer, rather than the employer. They also developed a co-dependency with the College who offered them both indemnity insurance and political advocacy.

Figure 1.2 New Zealand Health Service 1993/4



CONSUMERS

Basic hospital and community health services including maternity were provided free at the point of consumption to all New Zealanders.

GPs and other private health providers could negotiate contracts to provide previously public health services which would then be free of charge to the public.

THE NEW ZEALAND HEALTH SYSTEM AFTER THE 1993/4 HEALTH REFORMS

The 1993/4 health reforms were based on a market model encouraging providers to compete for service provision. All necessary hospital and diagnostic services including maternity, were provided free of charge to consumers, but private providers could contest contracts to access this funding to provide services. GPs (except in maternity service provision) and private specialists were able to charge co-payments. Waiting lists curbed demand on non-urgent treatment. Private hospital and specialist services not covered under a contract with an RHAs incurred out of pocket expenses or private insurance.

THE HEALTH REFORMS IMPACT ON MIDWIFERY

The Health and Disability Services Act was introduced in 1993 with the establishment of four Regional Health Authorities and twenty-three Crown Health Enterprises (CHEs). All public hospitals had been distributed among the CHEs. All major cities had more then one CHE. This also marked the opening up of public health service provision to private and community providers. Essentially service providers competed among themselves for contracts with the Regional Health Authorities (RHAs). Because the contracts only covered a twelve-month period, long-term employment prospects became less secure in some sectors. Some groups became particularly vulnerable, as the Employment Contracts Act (1992) coupled with the breaking up of the fourteen Health Boards into twenty-three CHEs, had weakened their collective bargaining power. Midwives in small rural and community hospitals were particularly vulnerable. The threat to maternity services in these areas was also exacerbated by staff shortages as more of these midwives left to establish their own private practice.

The objectives of the health reforms were to improve efficiency, access, choice, flexibility and accountability of health services to the consumer, the public, who indirectly funded them (Cheyenne et al., 1997). Another, more subtle, mission was to decide what services should be funded publicly (core services) and which services consumers should pay for privately (Cheyenne et al., 1997). In line with this strategy and in an effort to make sense of maternity service provision within the new health climate as a whole, two key reports were produced in the same year. The first, a report to the National Advisory Committee on Core Health and Disability Services was presented to the Regional Health Authorities entitled 'Care of the Mother and Baby After Normal Birth' (DOH,1993).

This report recommended essential structures, policies and processes to do with childbearing that should be funded publicly. They supported a range of maternity care options being offered as an integrated package for women. An emphasis was placed on ensuring quality of service and competence of practitioners. Both this document and the second report, compiled by Coopers and Lybrand called 'First steps Towards an Integrated Maternity Service Framework' (1993), provided the philosophical framework for both Section 51 (HFA, 1996) of the Health and Disability Services Act (1993) (which describes the maternity services to be publicly funded and provided by individual practitioners) and the Maternity Service Specifications (which describe the services to be provided in maternity hospitals). These formed the basis of contracts between the

hospitals and the Health Funding Authorities. The specific contents of Section 51 (HFA, 1996) were negotiated between the professional organisations representing the key maternity practitioners (doctors and midwives) and a single body representing the four Regional Health Authorities.

This negotiation of Section 51 (HFA, 1996) became very protracted as it included not only a list of specific services and payments, but also a set of comprehensive referral guidelines that ultimately distinguished the midwifery from the obstetric (medical specialist) scope of practice. Because of the equity previously agreed between general practitioners and midwives, the referral guidelines by default confined the activities of general practitioners in maternity to those of a midwife. In fact, Section 51 (HFA, 1996) made it impossible for a general practitioner to provide LMC services to birthing and postnatal women, without arranging and paying for a specified level of midwifery services. Midwives on the other hand, were entitled to provide LMC services without the input of a general practitioner. Midwives referred directly to obstetric and paediatric specialists if and when necessary.

Frustratingly for midwives, the existence of four Regional Health Authorities meant that there was no consistency in maternity facility (hospital) contracts taken up in the different areas. The formation of a Joint Maternity Project by the four Regional Health Authorities to negotiate at Section 51(HFA, 1996) at least meant national consistency in self-employed midwives' and doctors' payment. The problem for both professional and facility providers was that the facility contracts, which were negotiated separately by the four RHAs, had to interface with Section 51 (HFA, 1996). These contracts were all different. The NZCOM and the New Zealand Medical Association (NZMA) were the only parties involved in direct negotiations with the Joint Maternity Project. CHEs were excluded, even though their midwives accessed Section 51 (HFA, 1996) on their behalf and they had to provide a hospital service that complimented and augmented those paid for by Section 51(HFA, 1996). There was not just a purchaser provider split, but also a private public split, with the hospitals feeling that they were left to provide a 'fall back' service for the self-employed doctors and midwives (Experience as manager).

These types of tensions did little to engender good relations between employed and self-employed midwives when their services interfaced at the hospital level. Hospital midwives needed to provide 24-hour coverage in maternity hospitals while self-employed midwives were able to leave their women to the care of hospital midwives between visits and see their other clients in the community. By 1994, 406 midwives

(estimated as 27% of the practicing workforce) described themselves as self-employed (O'Connor, 1994). A shortage of hospital midwives was being felt. The 'fee-for-service' uncapped remuneration package to which self-employed midwives were entitled was very lucrative compared with the pay rate of most hospital midwives. However, this was to change in 1996 with the culmination of a review of Section 51 and the implementation of a modular payment system which required one Lead Maternity Carer (LMC), either a doctor or midwife, to register the woman, thus preventing two health professionals claiming for services given to the same woman.

THE EMPLOYED:SELF-EMPLOYED MIDWIFERY INTERFACE

A cover story in the New Zealand Nurses Journal (O'Connor, 1994) provided an interesting view on the issues of the day from the perspective of hospital-employed midwives' industrial representatives. The key challenge for them was the desire of midwives to work simultaneously in both the public and private (self-employed) sector. They cited difficulties in recruitment of midwives as an indicator of leniency of CHEs towards midwives who wanted to work in both roles. There was no mention of the fact that doctors had managed this dual role for years. They also cited variations to the collective nurses' contract that they had negotiated in some areas to enable midwives to work more flexibly.

The inability of the NZNO to envision a midwifery service as different from one provided by nurses was evident in their concern over the need to ensure midwives had a certain number of days off a week and worked no more than a specified number of hours in a stretch. The concept of a practitioner being able to have personal responsibility for their own well-being within a salaried workforce and the concept of support for innovative organisational change was not evident. The focus by NZNA members and their negotiators on industrial relations rather than progress of the profession, could be viewed as a major stumbling block to the full development of these midwives' practice within hospitals.

The lack of documentation on the development of hospital-based maternity services by employed midwives in New Zealand prevents a full discussion of the enhancers and barriers to fruition of their autonomy within this setting. It appeared that midwives with entrepreneurial or leadership skills left hospital employment. Most went into independent practice or into midwifery education, which was starting to expand rapidly. This had a direct impact on the level of care and professional support available to self-employed midwives when they entered the hospital with their client as core staff

members and skills were depleted. These issues continue to be a constant source of tension between midwives.

Revision of the Health Service-contracting Model

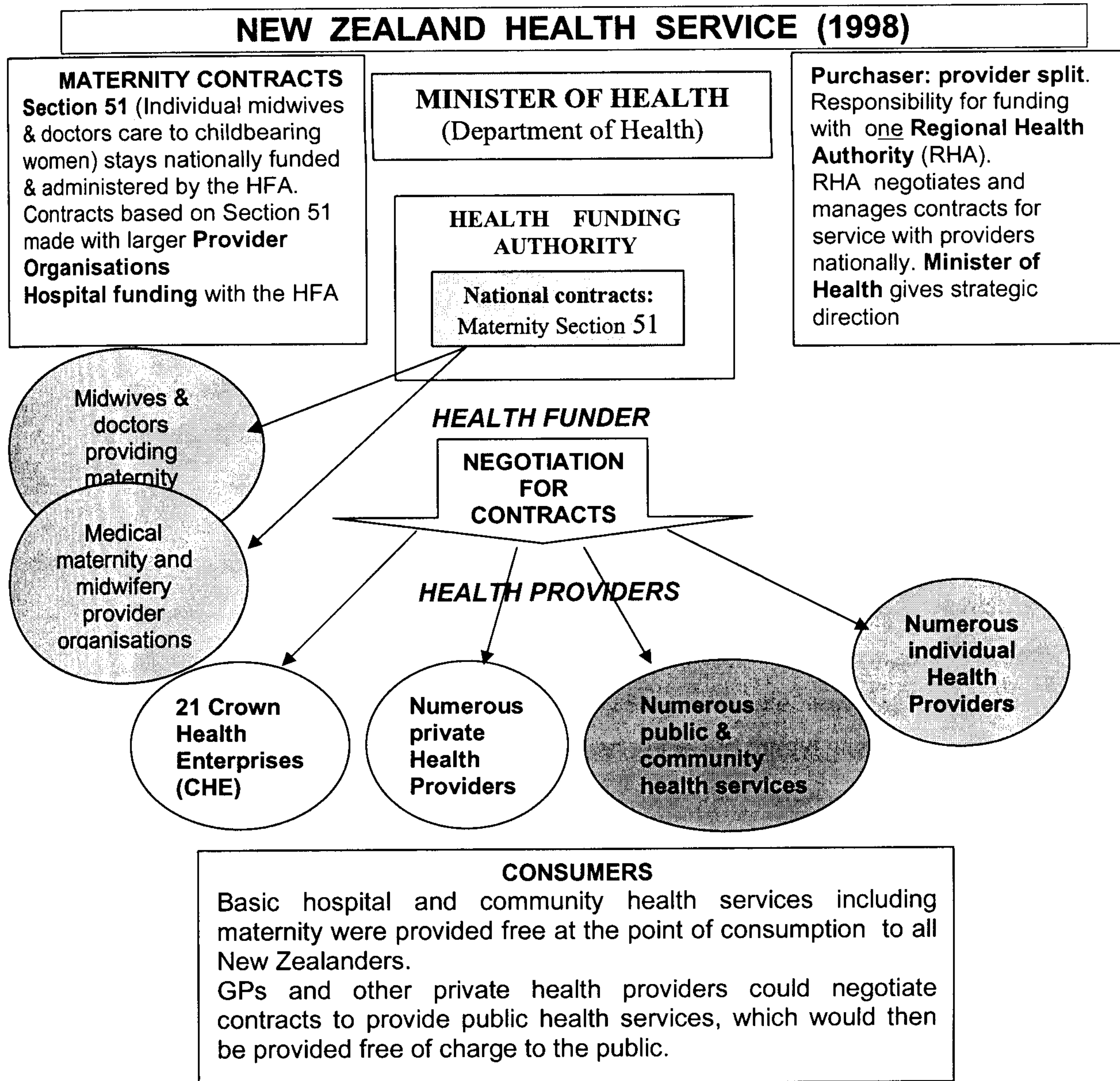
By 1996 there was a slowing down of the health reforms as a new coalition government called for a review of progress. The funder provider split had not provided the savings and quality anticipated. The transaction costs and short-term contracting had all but decimated parts of the health sector, particularly public and rural health (Boston et al., 1999). The general practitioners had formed themselves into Practitioner Organisations, which provided them with a collective bargaining voice and budget holding. However, this gave them the perverse incentive to cost shift onto other providers, mainly the CHEs which led to an increase in waiting lists exacerbating the public perception of inefficiently run hospitals.

Four years following the introduction of the market-focused health reforms, it became apparent that the public (previously state owned) hospitals were ill equipped to become commercial organisations as rapidly as expected. Lagging information technology, increased consumer demand for services and quality, increasingly complex and costly diagnostic equipment combined with poor workforce planning and adversarial relationships between providers, set the hospitals up for failure (Boston et al., 1999). Maternity services were similarly affected.

By 1997 there was a distinct move from competition to patient-focused services. This was mirrored internationally (Boston et al., 1999). Collaboration and co-operation were encouraged. The purchaser provider split was abandoned, hospitals were redefined as not-for-profit and the four RHAs were replaced by one. Contracting periods were extended. By this time over a third of the midwifery workforce were self-employed (Guilliland, 1998), being paid in a modular format earning considerably less than formerly under the fee-for-service Maternity Benefit Schedule.

The flow from hospital to self-employment appeared to steady and by 1998, 51% of newly registered (Direct Entry) midwives were employed within hospitals (NZHIS, 2000). There still remains poor data on the actual state of hospital-based midwifery. Continuity of care teams/practices were established around the country by most maternity hospitals at various stages, a few continue, but most struggled to survive as midwife/doctor Practitioner Organisations moved into the market, offering more support for self-employed midwives (Communication with midwives, national meeting 1999).

Figure 1.3. New Zealand Health Service 1998



CONSUMERS

Basic hospital and community health services including maternity were provided free at the point of consumption to all New Zealanders.
GPs and other private health providers could negotiate contracts to provide public health services, which would then be provided free of charge to the public.

THE NEW ZEALAND HEALTH SYSTEM FOUR YEARS AFTER THE 'HEALTH REFORMS'

The cost and complexity of four health funders saw a revision to one HFA. National provider contracts were encouraged, to achieve more national consistency in service availability. All necessary hospital and diagnostic services including maternity, remained free of charge to consumers. GPs (except in maternity service provision) and private specialists were able to charge co-payments. Waiting lists continued to curb demand on non-urgent treatment. Private hospital and specialist services not covered under a contract with an HFA incurred out of pocket expenses or private insurance.

CONCLUSION

Midwifery services in New Zealand, have been responsive to a variety of social policy initiatives over the last sixty years. From a relatively independent existence in the earlier part of the century (Donley, 1998) midwifery became increasingly subsumed into the health sector as hospitalised childbirth became increasingly popular and available from the 1920s onwards. The establishment of the social welfare system in 1938 finally established maternity services under the umbrella of 'health' and from then on midwives and maternity care remained at the whim of every social policy initiative that impacted on hospitals. The subtle and incidental erosion of midwifery as a profession distinct from nursing reached a point in 1977 when the term 'obstetric nurse' legally defined the role of a midwife.

By the late 1970s nearly all midwives were working within a hospital environment (Guilliland, 1998) and competing with other health care providers for increasingly limited resources, such as practice development and training opportunities. The attraction of a generic nursing role in maternity care and the need to increase staffing levels in maternity hospitals to meet the rising birth rate, resulted in the amendment to the Nurses Act (1977) enabling registered nurses to attend women in childbearing, thus eliminating the need for midwives. Donley (1998) argues that this shift in focus to nursing as maternity care providers was a response to the needs of medical practitioners rather than women. This would support the view that social policy leading up to this period was professionally based (biased). The technocratisation of policy advice, which emerged during the 1980s, was not to have a significant effect on hospitals until the end of the decade with the introduction of managerialism and economic accountability. It would appear, however, that the consumer movement that was emerging at the same time served the cause of midwifery better than that of medicine.

A by-product of the 1983 Amendment to the Nurses Act (NZ Government, 1983), spurred midwives and their consumers into action. The NZNA was the first target. Their seeming indifference, or collusion, in the state of affairs midwifery was now facing, culminated in a vote of no confidence in the nursing profession at a national conference in 1984, by their midwife members. This marked a turning point for midwives (Abel, 1997) who went on to break away from their nursing colleagues and form their own College in 1989. The power of the women's health consumer movement must be seen as a key force in this achievement.

A year later, midwifery autonomy was achieved through an amendment to the 1977 Nurses Act (NZ Government, 1977). These professionally liberating moves were merely the reflection of a more fundamental shift in health policy direction. While midwives found themselves in direct competition with doctors for clients, it would only take another three years until the entire health sector was pushed into competition by the Health and Disability Services Act (1993).

In this environment hospital-employed midwives, reliant on the Nurses Association to represent them industrially, had a more difficult task transforming their roles into autonomous practice. They were mainly constrained by health service providers and nurse colleagues who had difficulty differentiating midwifery as a separate profession from nursing. The time and energy required by self-employed midwives and the profession to fight for the maintenance of parity with doctors in maternity care over the decade, meant that little energy has been left to focus on the development of hospital-based midwives.

Perhaps the focus by the College on the autonomous practitioner outside of the hospitals was the most constructive mechanism for developing the distinctions between nursing and midwifery. This fundamental strategy may also have been instrumental in the ongoing sustainability of the profession and the parity gained with the medical profession in maternity services. The strategy of midwives to explore their scope of practice unencumbered by obligations to employers, seemed to have enabled the profession to be more responsive and proactive within the rapidly changing sociopolitical health service environment of the 1990's.

The main fish-hook in this strategy appears to be centred on the continued reliance by LMC midwives and women on maternity hospitals for the provision of care during childbirth. As long as hospital-employed midwives are relied upon by their self-employed colleagues (who earn an comparatively higher income in relation to the earnings of most employed midwives), to give care to women while they are hospitalised postnatally, this interface will continue to be a source of tension. It would seem that until there is a shared philosophy and agreed and integrated scope of practice worked out between both groups of midwives, this aspect of maternity service delivery will remain a fractious one.

REFERENCES

Abel, S. (1997) *Midwifery and maternity services in transition: an examination of change following the Nurses Amendment Act 1990.* PHD Thesis University of Auckland, New Zealand.

Blank, R. (1994) New Zealand health policy: a comparative study. *Oxford Readings in New Zealand Politics.* Auckland: Oxford University Press,

Boston,.J. (1992) Redesigning New Zealand's Welfare State in The decent society? *Essays in response to National's social and economic policies'* Eds. Boston, J., & Dalzeil, P. Auckland: Oxford University Press.

Boston, J., Dalziel, P., & St John, S. (1999) *Redesigning the welfare state in New Zealand:problems, policies, prospects.* Auckland: Oxford University Press.

Campbell, R., & Garcia, J. (1997) *The organisation of maternity care: a guide to Evaluation.* GB: Hochland & Hochland.

Coopers and Lybrand (1993) *First steps towards an integrated maternity service.* Report for Joint Health Funding Authorities maternity project. Wellington

Cheyenne, C., O'Brien, M., & Belgrade, M. (1997) *Social policy in Aotearoa New Zealand: a critical introduction.* Auckland NZ: Oxford University Press.

Davis, P., Ashton. (2001) *Health and public policy in New Zealand* Auckland NZ: Oxford University Press.

Department of Health (1989) *Discussion paper on care for pregnancy and childbirth.* Wellington: NZ Govt.

Donley.J (1998) *Birthrites: natural vs unnatural childbirth in New Zealand.* Auckland NZ: The Full Court Press.

Donley, J. (1998) *New Zealand College of Midwives Journal* Issue 19:18-19

Fougere.G, (1992) The state and health care reform. in New Zealand. *Health and Hospital* Auckland NZ:July/August: (14-20).

Gibbs, A., (1988) *Unshackling the hospitals* Report of the Hospitals and Related Health services Taskforce. Department of Health, Wellington, New Zealand.

Guilliland, K. (1998) *A Demographic profile of Independent (self-employed) midwives in New Zealand Aotearoa.* Thesis for Masters of Arts in Midwifery. Victoria University. Wellington New Zealand.

Hanft. R. (1981) Use of Social Data for Policy Analysis and Policy-making. *Milbank memorial fund quarterly/health and society.* 59:596-613

Health Funding Authority (2000) *Maternity services: a reference document.* Wellington, New Zealand

Health Funding Authority (1996) *Advice notice issued pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand

Health Funding Authority (1998) *Notice issued pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand

Latham. M. (1998). *Civilising global capital.* St Leonards, Australia: Allan and Unwin.

Ministry of Health. (2002). *Maternity services: notice pursuant to Section 88 of the Public Health and Disability Act 2000.* Wellington, New Zealand.

Ministry of Health. (2001). *Report on maternity* 1999. Wellington, New Zealand.

Navarro.V, (1989). Why Some Countries Have National Health Insurance, Others Have Health Services and the US Has Neither. *Social Science and Medicine* 28:887- 898.

New Zealand Government (1990). *Nurses Amendment Act,* Wellington, New Zealand.

New Zealand Government (1977). *Nurses Act*, Wellington, NZ.

New Zealand Government (1990). *New Zealand Bill of Rights*, Wellington, NZ.

New Zealand Government (1992). *Employment Contracts Act*, Wellington, NZ.

New Zealand Government (1992). *New Zealand Accident Rehabilitation and Compensation Act,* Wellington, NZ.

New Zealand Government (1993). *Health and Disability Services Act*, Wellington, NZ.

New Zealand Regional Health Authorities (1993) *First steps towards an integrated maternity services framework.* Report by Coopers and Lybrand. Wellington NZ.

New Zealand Health Information Service (2000). *Workforce Statistics for Nurses and Midwives.* http://www.nzhis.govt.nz/stats/nursestats.html

Ormerod.P, (1998). *Butterfly economics.* London: Faber and Faber Ltd.

O'Connor, T. (1984). Guiding Midwives *Kai Tiaki: Nursing New Zealand*: March: 12-14.

Pairman, S. (1999) *New Zealand College of Midwives education framework.* NZCOM November

Pairman, S. (1998). *The midwifery partnership: an exploration of the midwife/woman relationship.* Thesis for Masters of Arts in Midwifery. Victoria University Wellington New Zealand.

Regional health Authority (1993) *Care of mother and baby after normal birth.* Wellington, NZ

Tully, E., (1999). *Doing professionalism 'differently': negotiating midwifery autonomy in Aotearoa/New Zealand.* PHD Thesis, Canterbury University, New Zealand.

Part Two:
COMPLEXITY THEORY: EMERGENCE OF A THEORETICAL FRAMEWORK TO ASSIST IN UNDERSTANDING ORGANISATIONAL CHANGE WITHIN NEW ZEALAND MATERNITY SERVICES.

CONTEXT

Analysis of the socio-political context of midwifery in New Zealand, completed in Part One of this portfolio, demonstrated volatility and unintended consequences of policy and health service development initiatives. The confusion created within this environment required development of a framework which could more comprehensively and strategically analyse the role of midwives as they fashioned the maternity service in New Zealand to meet their own and womens' needs. The words 'chaos' and 'complex' had been frequently used by colleagues in midwifery and health sector planning to describe the spin that midwifery autonomy seemed to put on the development of maternity services in New Zealand following the 1990 Nurses Amendment Act (1990).

On-line exploration of theories in the area of organisational development that used the words 'chaos' and 'complexity', uncovered 'complexity theory' (Berreby, 1998; Dimitrov, 1999; Lissack, 2000; Stonier & Yu, 2000). At the time of writing this paper in late 1999 and early 2000, I was a midwife lecturer at Victoria University (Wellington, NZ) in the postgraduate Nursing and Midwifery Department. I discovered that Colin Campbell-Hunt, a name that kept coming up in the New Zealand literature on complexity theory, was also a lecturer at Victoria University in the Business Studies Department. He was able to provide me with some of his writing on the topic and point me in the direction of some useful recent texts. These texts by Byrne (1998) and Cilliers (1998) provided me with sufficient background information on the formative development of the theory to synthesise various articles I had gathered on the topic into a series of principles. These I refer to as the principles of complexity theory and I have used as an explanatory model. I have found these a useful guide in both this portfolio of work and my professional life.

At the time I had also ventured into self-employment (part-time) as a consultant in health service development, which involved me undertaking a range of projects. My

first commission was as a planner representing clinicians in the redesign of their 250 bed general provincial hospital. This included a maternity service, which was being 'downsized' from three wards to one ten-bed ward. The experience of supporting staff while maintaining the vision of the redesign enabled me to test the principles of complexity theory in my role as health advisor on the project. I also undertook a number of auditing projects in the areas of health education and service provision. These also gave me the opportunity to reflect on the application of complexity theory to explain and analyse details of the organisation of health services and led to a more serious exploration of the literature.

In the early years of the doctoral journey, colleagues had known of my interest in complexity theory and I had given a number of presentations on the subject, stimulating discussion about its application to the health sector. More recently, this theory has become popular and visible in current health literature (Plsek & Greenhalgh, 2001; Wilson, Holt & Greenhalgh, 2001; Fraser & Greenhalgh, 2001; Higginbotham, Albrecht & Connor, 2001). I have found this very exciting because it represents a growing recognition of the complexity of the health sector and that change is a constant and vital part of existence. It also recognises that health services are inextricably linked in and shaped by the geographical and human constructs within our environment. Increasingly it is recognised that there will be no 'quick fixes' or formula solutions to deal with the challenges of health service delivery.

The following paper introduces complexity theory and discusses the development of some basic concepts, which have the potential to be used as guiding principles in both organisational analysis and strategic decision-making. These principles initially evolved out of the literature, then were reshaped through my reflection and personal observation, gained through participation in the health sector over the past 30 years. For me, they have provided a framework for analysis, understanding and action that is explored more fully within other sections of the portfolio.

INTRODUCTION

Midwives in New Zealand gained the opportunity, through legal and economic incentives with the passage of Nurses Amendment Act in 1990 (NZ Government, 1990), to become recognised as the health care professionals of choice in normal childbirth. This gave midwives access the same funding and privileges as doctors in the delivery of maternity care to women anticipating a normal birth. Further more, while the provision of midwifery care for all women in childbirth was made a requirement in

New Zealand through Section 51 of the Health and Disability Services Act 1993 (HFA, 1996 & 1998), a medical presence became optional[1].

A number of opportunities for maternity service development appeared possible as a result of these developments, such as:
a decrease in medicalised childbirth and a reduction in overall intervention rates,
the development of 'midwifery only' community birthing facilities and an increase in home births with a corresponding increase in intervention rates in referral facilities because they are retained only for their appropriate function,
a flourishing of midwifery-led maternity organisations,
the development of autonomous midwifery services within the main maternity facilities,
the disappearance of non-specialist medical practitioners offering maternity services,
a revision of specialist obstetricians' scope of practice to provide specialist advice and intervention in 'at risk' childbearing situations only.

In terms of achievement of the above possibilities, by 1999, almost seventy percent of all women birthing in New Zealand had a midwife as their Lead Maternity Carer (LMC) and the home birth rate was slowly rising (MOH, 2001). Some goals, however, were slower in attainment. Intervention rates continued to increase (MOH 2000) as illustrated in Table 2.1 below.

[1] Under Section 51 (HFA, 1996) all childbearing women were required to have midwifery care arranged for them by their Lead Maternity Carer. Women were not required to have medical care.

TABLE 2.1 BIRTH OUTCOMES 1990 -1999 IN NEW ZEALAND

Interventions [2] (per 100 births)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Caesarean Sections*	12.0	13.2	13.0	13.4	14.7	14.9	15.8	16.9	18.2	20.4
Vacuum Extraction	1.2	1.7	1.7	1.8	2.0	2.4	2.9	3.8	4.9	4.8
Forceps	10.0	9.3	8.7	8.7	8.3	8.3	7.7	7.3	6.6	5.3
Non-operative vaginal births	76.8	75.8	76.6	76.1	75.0	74.4	73.6	72	70.3	69.5
Episiotomy	10.0	8.0	7.2	7.0	7.0	7.4	7.0	6.7	6.4	12.1
Epidural	NR*	NR*	NR*	NR*	NR*	NR*	15.0	21.3	23.4	22.8
Induction	5.2	6.0	5.6	6.6	7.7	9.8	18.6	21.0	22.1	27.2

* NR = not recorded.

Some midwifery-led birthing facilities in New Zealand had been maintained and developed in rural areas, while few urban midwifery-led facilities remained. A Midwifery Provider Organisation was established (the Midwifery and Maternity Provider Organisation (MMPO) with the support of the NZCOM in 1997. By 2000, the MMPO had a membership of seventy-five self-employed midwives from throughout the South Island (Communication with MMPO Director, 2000)[3]. Most other self-employed midwives throughout the country had either remained working in small co-operatives, or amalgamated with larger medically-led practitioner organisations (personal communication with NZCOM National Director and attendance at NZCOM National Committee Meetings, 2000).

The development of autonomous midwifery services, including midwives taking on the Lead Maternity Carer role within main maternity facilities had waxed and waned over the 1990s across the country. Although some hospitals had developed relatively autonomous continuity of midwifery care practices, others had constrained their employed midwives into working in managerially defined contractual relationships with medical practitioners LMCs (communication with midwives in four of five tertiary maternity facilities in New Zealand during NZCOM National Committee meetings).

[2] MOH (2000)

In some parts of the country the development of inventive maternity service arrangements by medical practitioner organisations had enabled general practitioners to maintain and even take up obstetric practice. The contractual relationships with some maternity hospitals had enabled doctors to access employed midwifery services for their clients at a low fixed price, thus cutting self-employed midwives out of potential business. Employed midwives were then placed in the unenviable position of maintaining the status quo for general practitioner involvement in maternity care. Similar arrangements also enabled obstetric specialists to continue providing care to women anticipating a normal birth (personal communication with HFA Maternity Manager 2000)[4].

This mosaic of maternity service provision in New Zealand, following the 1990 Amendment to the Nurses Act, and the place of midwives within it, provided an ideal context for the development and testing of a theoretical framework based on complexity theory. This section of the portfolio explores the development of principles distilled from the key concepts of complexity theory in order to provide a theoretical framework with which to guide investigation into the barriers and enablers of midwifery developments in New Zealand.

THE DEVELOPMENT OF A THEORETICAL FRAMEWORK BASED ON COMPLEXITY THEORY

Theoretical frameworks articulate a general viewpoint and provide an intellectual map for interpreting the world in which we live (Kenny, 1994). Guba and Lincoln (1995) argue that 'questions of method are secondary to questions of paradigm,' which they define as 'the basic belief system or world view that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways' (1995p105). Avoiding the constraint of a method specific paradigm, the development and articulation of a theoretical framework based on complexity theory principles in this doctorate, seemed to be most useful for analysis and explanation, given the multifaceted, constantly changing nature of the health system in New Zealand.

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[3] By 2002, the membership had increased to over 300 midwives from throughout New Zealand (Personal communication with NZCOM),

[4] In 1999, almost 20% of birthing women had a general practitioner as their LMC (MOH, 2001).

INTRODUCTION TO COMPLEXITY THEORY

Complexity theory, as it had been developing in social science writing in recent years, is claimed to have evolved initially out of mathematical and computer studies in Chaos Theory, to which some writers still see it linked (Byrne 1998; Dimitrov, Hodge, Khun & Woog, 1999). Its adaptability, however, as a theoretical tool for the study of complex evolving human systems has also been shaped by ecologists, behavioural scientists and organisational theorists (Cilliers, 1998; Campbell-Hunt, 1998). The attraction of this theory to social science was its recognition that order and linearity of relationships do not exist in 'real life' (Byrne,1998). Complexity theory moves beyond the concepts of order by focusing on the dynamic nature of relationships.

This theory captured the imagination of those social scientists, frustrated by the disconnectedness of the post-modern view, because of its potential to 'construct the deconstructed' through recognising patterns of behaviour and the interconnectedness of humans to the world in which we live (Byrne, 1998; Cilliers, 1998). Depending on the context (including the experience and belief system) of both the observer and the agent (individual), individuals are as predictable or unpredictable as the weather; we can be viewed as behaving in rational or irrational ways. We are immeasurably influenced by, and have influence on events in our everyday life (Byrne, 1998). Likewise organisations, essentially collections of individuals, exhibit the same characteristics for the same reasons.

While such characteristics at times may led to what could be described as chaos, complexity theory does not equate chaos with randomness, but rather a different form of order (Cilliers, 1998). Patterns visible in responses to challenging situations 'draw attention to the limits of control and to the evolutionary and self-organising nature' (Arndt & Bigelow, 2000p37) of individuals and the systems within which they function. As environments become more complex as a result of more rapid communication, better informed consumers and increasing competition for limited resources, the organisations within them become more complex trying to adapt to meet their own survival needs (Grobstein, 1997).

As illustrated in Part One of this portfolio, the maternity system in New Zealand over the 1990s had become more complex. As particular aspects of the system are explored to gain greater understanding, the more complicated and inextricably linked to other systems these appear to be. Using a specific example, the interface between the self-

employed midwives and hospital-employed midwives during care of a woman postnatally in hospital, is governed not only by professional standards, but by legislation (Section 51, 1998), position descriptions, access agreements, the woman's plan of care, industrial contracts, Facility Service Specifications and hospital protocols and policies. The geographic location of the service, the staff mix and traditional roles of medical practitioners in maternity care, also determine the characteristics of the service the woman receives.

The analysis and interpretations of these situations are further complicated by the framing that participants (the midwives, woman, her family and others) each apply, based on their relationships within the system, their previous experiences and the context of their current position(s). To add further complexity, an observer's perception (such as a manager or researcher) of the functioning of the system/organisation is also influenced by their previous experience, local knowledge and basic philosophical beliefs. Within this context, the impact of economic and/or socio-political interventions makes predictability of their effect and usefulness very difficult.

Isolated deconstruction of specific aspects of events and systems do not enable the interrelated and 'borderless' (Sherman & Schultz, 1998) nature of system/organisations and their parts to be appreciated. Van Uden, Richardson and Cilliers (2001) contend that complex systems are incompressible and irreducible, meaning that it is impossible to have a complete account of a complex system and that they cannot be reduced to distinct identifiable parts. Their boundaryless nature challenges use of the term 'organisation' or 'system' as a single entity. More accurately there could only be the study of part systems, which challenges the notion of incompressibility. While offering no concrete strategies for coping with these paradoxes, awareness of these concepts when analysing systems is advised. By looking at a partial complex system, we 'disconnect it from the habitat in which it makes sense' (Van Uden et al., 2001p59). It is with these understandings that the application of the concepts of complexity theory to the study of the maternity 'system' in New Zealand will be explored.

Towards an Understanding of Complexity Theory

By its very nature the concept of a working definition of complexity theory at either qualitative or quantitative levels remains elusive (Cilliers,1998). An analysis of the characteristics identified in the literature on complex systems seemed to provide the most useful mechanism to convey a general description of complexity theory (Cilliers, 1998; Byrne, 1998; Warren, Franklin & Streeter, 1998; Grobstein, 1997).

From an organisational perspective, complex systems are frequently identified as appearing at the 'edge of chaos' (Campbell-Hunt, 1998p36). They are brought to 'critical states' (Campbell-Hunt, 1998:36), commonly by increasing resistance to change. The energy generated by such activities results in complex interaction between the various agents who are trying to either redefine their positions within the old order (to maintain the status quo), or adapt to the new, as a response to the threat of instability and the unknown.

Features of flexibility, adaptability and resilience appear to be key determinants for survival within the constantly changing, increasingly interactive environment of modern organisations (Warren, Franklin & Streeter, 1998p358). Analysis of these adaptive processes enable key characteristics, tools and techniques, developed by these organisations and the agents within them, to be identified and their role explored. However, this analysis must be context related. This includes positioning within their historical, social and geographical environments. Organisations and individuals within them are seen as inextricably linked in a mutually dependent and reciprocal relationship, which has evolved and adapted over time. They are a product of their environment (Dimitrov, 1999; Byrne, 1998; Cilliers, 1998).

A key feature of complex systems, is their *attraction* to 'edge of chaos states' (Campbell-Hunt, 1998:36), which is defined as the dynamic balance between order and disorder. Conversely, systems which do not exhibit the features of complexity through continual adaptation are doomed to anonymity through either being subsumed within larger systems or disappearing entirely, thus becoming extinct (Cilliers, 1998).

The interpretation and nature of patterns play a large part in complexity theory (Byrne, 1998). The close observation of an organisation or agent's behaviour enables the identification of repeated, episodic activities (or responses), which, while appearing initially similar or even habitual, can subtly or abruptly change seemingly at random. Familiarity with the context of these episodic aberrations, are claimed to inform the most opportunistic timing for the introduction of change into an organisation (Campbell-Hunt, 1998:36).

Timing and readiness for change also appear crucial adaptive determinants for survival of agents within systems. A 'sensitive dependence on the initial conditions' (McKissock & McKissock, 1998) for change is believed to justify focusing on the contextual

environment as a short-term predictor of future functioning. Change is essential, it is a sign of adaptation to the environment, which increases the chances of survival.

Other authors on complexity theory, or those using its concepts, have relied on the development of descriptions of complex systems, to encapsulate the concepts of complexity theory. Grobstein (1997) developed a conceptual framework consisting of eleven statements guiding ways to make sense of new situations while Harris (2000) used complexity theory to develop a set of principles guiding relationship management within organisations. Cilliers (1998) listed ten features of complex systems gleaned through the lens of complexity theory. Byrne (1998) on the other hand, focuses on identifying and explaining key terms that had become synonymous with complexity theory in an effort to clarify the theoretical concepts. It is through the work of these and others (White, Marin, Brazeal and Friedman, 1997; Campbell-Hunt, 1998; Sherman & Schultz, 1998; Dimitrov, 1999; Stonier & Yu, 2000; Livesley, 2000), that I have distilled key principles into a framework for the analysis of health systems, such as maternity services.

Prior to introducing these principles, a description of the characteristics of complex systems will be given and their application to features of the contemporary maternity service in New Zealand will be made.

CHARACTERISTICS OF COMPLEX SYSTEMS

Complex systems/organisations have limitless potentiality

Complex systems are described as having more possibilities than can be actualised (Cilliers, 1998). They consist of a large number of unique individuals (also read agents, elements, subsystems or units (Cilliers, 1998; Campbell-Hunt, 1998; Stonier & Yu, 2000; Livesley, 2000) who change over time. Each individual is ignorant of (unable to define) the system as a whole because their location, relationships and past experience within the system, and outside the system, limit their perception. The boarderless nature of systems is created by their interdependence on the environment, including other systems/organisations. These features muddy attempts to arrive at a collectively agreed description of the scope of an organisation as a whole (Cilliers, 1998; Campbell-Hunt, 1998; Stonier & Yu, 2000).

It is difficult to comprehend fully the internal and external service interfaces (boundaries) when viewing such a complex system as the New Zealand maternity service. They are actually never fixed/static. Self-employed midwives may see

themselves as working outside of the system, but as long as they are dependent on accessing public funding, using the hospital to birth women in and rely on obstetric facilities to provide updating and back-up for emergencies, they are not outside the system. Yet in an exercise with midwives undertaking a postgraduate midwifery paper, where they were asked to draw their working environment, self-employed case loading midwives drew a community with houses and a hospital in the distance, their car and women with families. The hospital-employed midwives drew a cross section of the hospital with the wards, labour ward and other internal features identified. Both groups saw the 'whole system' differently[5].

The interface with other systems/organisations is difficult to define

As described above, the borderless nature of complex systems makes the edge hard to define. While the whole system is made up of parts, the reciprocal relationships between the parts within the whole make, the whole more than the sum of the parts (Gorbstein, 1997). The relationship between the whole and the parts give rise to change, often apparently randomly. Healthy systems are constantly evolving (the pace fluctuates), they are interactive and open, having influence on and are influenced by the environment, both internal and external. A reciprocal relationship with the environment maximises opportunities for survival (Cilliers, 1998; Campbell-Hunt, 1998; Byrne, 1998; Sherman & Schultz, 1998; Stonier & Yu, 2000).

An interesting example of overlapping and shifting boundaries is illustrated by the relationship between midwives and general practitioners in the New Zealand maternity setting following the 1990 changes to the Nurses Act (1977). General practitioners were required to find a midwife to provide midwifery care for their women in labour. The labour, birth and postnatal fees paid to midwives and doctors under section 51 (1996) was identical, but included the required provision of midwifery care. Out of their fee, doctors needed pay a midwife to give intrapartal and home based postnatal midwifery care. However, following the 1990 legislation, hospitals had downsized their labour ward staff as increasingly more women chose a midwife as a LMCs (and midwives left to become self-employed). Most midwives were providing intrapartal and postnatal midwifery care for their own clients. Initially, general practitioners formed business relationships with self-employed midwives, but over time the scarcity of midwives willing to do shared care with a doctor increased and the portion of the labour and birth payment midwives were expecting also increased.

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[5] This issue will be discussed more fully in Part Three of the portfolio.

Doctors were forced to collectively bargain with the hospitals to pay a fee for employed midwives to provide the statutory midwifery care for their birthing women. Because the hospitals were competing with each other for the 'fee-for-service' facility payment with each birthing woman, they were willing to undercut the fees charged by self-employed midwives to attract the doctors to use their hospital. The impact of this move was to increase the need to employ more midwives but it also increased the turn over of midwives because of their dissatisfaction with shared care[6]. By 1999, only 6.6% of general practitioners were left in New Zealand providing LMC maternity care to women (MOH, 2001). These moves ultimately reduced the choices that women had over the profession of their LMC.

Adaptation and change is necessary for survival.

Response to changing, more complex circumstances are imperative for survival of a system. The constant flow of energy generated by individuals' (and the system's) desire to achieve stability feeds the change process, however, the actual maintenance of stability stifles adaptation and makes the system vulnerable to extinction or adsorption within a more dynamic system. 'Adaptation usually implies that the system is capable of accommodating unpredictable changes or disturbances' (Stonier & Yu, 2000p1), whether internal or external. It is the tension between the desire to maintain stability and the challenge of imposed change as a result of environmental factors that fosters adaptive behaviour.

Using the previous example again, the general practitioners were attempting to recreate the old environment within a new context (or environment). They wanted to continue to use hospital midwives intrapartally, the way they always had. They were resistant to change and adaptation. Viewed through the lens of complexity theory, the environment had changed and their resistance to adaptation and attempt to maintain the status quo could be seen to have led to the near extinction of their involvement in the provision of maternity care[7]

Communication is non-linear and receiver defined

The frequency and nature of interaction within and between individuals in the system provide a critical element of their complexity. Interactions are usually non-linear and generally fairly short range to those in adjacent positions within the system. They reach

[6] Author's experience & discussion with NZCOM midwifery advisor.

[7] In Canterbury (NZ) 1983 –1985, 43% of all births were conducted by general practitioners (CDHB, 1989). By 1999 in the same region, the proportion had dropped to 6.9% (MOH, 2001).

a larger audience through steps, which modulate (alter) the message along the way. 'Feedback loops' (Campbell-Hunt, 1999), also usually modulated, re-present information to the receiver that can be enhancing (positive) or detracting (negative), thus influencing further adaptive (survival maintenance) behaviour (Cilliers, 1998; Campbell-Hunt, 1998; Stonier & Yu, 2000).

A specific feature of the governance function of NZCOM appears to illustrate these concepts, particularly the mechanism for maintaining contact with the 10 regions of the College. Four times a year, the College secretariat meet with all the regional and consumer representatives. This meeting takes place over three days and nights at a venue that also provides overnight accommodation for the out of town members.

The meeting is held with members in a very large circle (up to 30 attend), with people introducing themselves and giving feedback to the group on their activities and those of the region. Clothing is informal and food is consumed on the premises at large dining Tables. Each day there would be about three hours of informal discussion time which takes place wherever the groups would like to talk, in the garden, in the meeting room or over meals.

The relaxed environment and collegial support soon brings out issues that may otherwise have 'festered' or remained misunderstood. The College secretariat also has an opportunity to gauge the 'mood' of regions, where there are problems and where there are successes. They also identify where they need to concentrate support. This process is shared and open. There are tears, shouting and laughter over the three days. At the end, networking for the following three months is planned and the members go to spread the results of discussion in their region[8]. This process appears to have held the profession together during great change, allowing adaptation to occur in response to the multidimensional messages received from the membership, both practitioners and consumers.

Main Capabilities (Survival Mechanisms) of Complex Systems

Representation:
In order to respond to the environment, systems need to gather and store information. Interpretation of this information is dependent on dynamic interaction both from inside and outside (as defined by the observer) the system. Hence the system needs to be open. Meaning is contextually derived and determined (Byrne, 1998). Distributed

[8] Attendance by the author at the NZCOM National Committee meetings.

representation refers to the view of parts of the system by those inhabiting that part of the system and their view of other parts. Holistic representation provides a view of the system's connectedness, which is determined by looking from the outside (as defined by the observer). Both distributed and holistic representations together provide a multidimensional view of the system, which is vital for proactive decision-making and constructive adaptation (Cilliers, 1998; Byrne, 1998).

NZCOM quarterly national meetings, described above, provide a unique example of how an operational section of an organisation obtains and maintains a holistic view of the parts of the organisation. Another dimension of the organisation's regional and national functioning is obtained through summaries of findings of 'Standards Review' meetings[9], 'Complaints Resolution' processes[10] and national birth outcome data.

Self-organisation: A system needs to develop and adapt in order to cope with the changing environment. Containment within a rigid programme that controls behaviour and maintains constants, prevents self-organisation within and between systems, stifling adaptive change (Campbell-Hunt, 1999). Systems and their elements have to be information rich to self organise in the face of change (to adapt). Information cannot necessarily be classified as correct or wrong because it is never static and is contextually interpreted (Byrne, 1998). However, its interpretation has a profound impact on the self-organising capacity of a system and its survival.

Preconditions for self-organisation, or evolutionary growth, include competition among units for limited resources (and co-operation among some to increase the richness of information), non-linear interaction, heterogeneity, distributed storage of history (memory) and the constant striving to maintain a critical balance between rigid order and chaos (Campbell-Hunt, 1999; Cilliers, 1998).

Complex systems must be able to interpret their environment and have a level of resistance to change that moderates the degree of change necessary to warrant system adaptation. Added dimensions to this evolutionary process are timing and history (Cilliers, 1998; Sherman & Schultz, 1998). Two similar systems with different histories will respond differently given identical current conditions. The effects of history

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[9] A peer review process where individual midwives reflect on their clinical and professional performance over the previous 12 months (NZCOM brochure 2001).
[10] A consumer complaints service facilitated by a consumer and midwife (NZCOM brochure 2001)

can be studied, but not the actual history, because it is always being re-interpreted (Cilliers, 1998).

One area of midwifery which has been, until recently, neglected by the College has been the hospital-employed core[11] midwife, particularly those in the large tertiary hospitals (communication with N. Campbell, NZCOM Midwifery Advisor, 2001). These midwives had remained members of the Nurses Organisation, opting not to join the College. In many settings they seemed to work in conflict with continuity midwives. There seemed to have been a time lag between continuity and core midwives' adaptation to the provision of continuity of care. Core midwives had generally been slow to develop their roles in conjunction with the continuity midwife, even though most had trained together and worked along side each other prior to working in a continuity role. (Communication with N. Campbell, NZCOM Midwifery Advisor, 2001; Earl, Gibson, Isa, McAra-Cooper, McGregor & Thwaites, 2002). This marginalisation could be viewed as both the cause and effect of a restricted two-way communication between this group of midwives and NZCOM. It resulted in core midwives self-organising into their own identifiable group, within the Nurses organisation, clinging onto practice patterns which did not enable an easy integration with continuity of care provided by their self-employed colleagues. This situation tended to generate antagonism and 'patch protection'.

Evolution through adaptation.

'Emergence' (Dimitrov, 1999) was a term commonly used to describe the way particular features of the system seemed to suddenly appear over time (also known as change) in response to events threatening survival. These emergences lead to evolutionary change in the structure of the organisation, causing greater complexity. This increases the likelihood of the organisation 'breaking up' or 'self-organising' into smaller, like-minded (because they are operating on local information), systems to avoid the development of 'chaos' (Campbell-Hunt, 1999; Cilliers, 1998). Evolution is also influenced by history. Information from the past is stored to create adaptive strategies in response to the changing environment. Old responses that have worked in the past are likely to be applied. Rather than being blindly selected for survival or extinction, complexologists contend that change in structure and behaviour of part of the organisation is possible though strategic choice. For them, self-determination plays a key role (White, Marin, Brazeal & Friedman, 1997).

[11] Core midwives work on shifts in the labour and/or postnatal ward, not as LMCs.

Using the example of the employed midwives, a key motivator for recent change (adaptation), seemed to have been the College's decision to set up a union within NZCOM to represent employed midwives, most of whom are core midwives. This move was precipitated by their increasing disenfranchisement with the Nurses Organisation, the union representing midwives. Core midwives had felt that their unique midwifery skills and responsibilities were not understood or considered within this nursing organisation. Following the College's setting up of the midwives union (MERAS), in 2002, membership of the College of Midwives by employed midwives has increased significantly (NZCOM CEO, 2002). Core midwives were subsequently becoming more visible and involved in the College at regional and national level. Overall, the strength of the College was augmented by this increase in membership and diversity, further increasing its chances of survival at a time when health budgets were being devolved to the hospitals.

Patterns can be observed within and between systems and over time.

The term 'fractal' is frequently used to describe the types of patterns observable within systems by complexity theorists (Cilliers, 1998; Byrne, 1998). This implies that a part of the system is actually a microcosm of the whole system. There will be features observed within the part, which will also be present within others. Notionally a comparison between a number of parts identifying similar characteristics will signal a system-wide pattern of behaviour. The patterns have generally developed over time as a result of successful adaptive responses to a changing environment (Cilliers, 1998; Byrne, 1998; Van Uden et al., 2001).

It could be argued using the previous example, that hospital-employed midwives' patterned resistance to adapt with their colleagues in continuity, was related to their working environment which maintained the conformity of a nursing role for employed core midwives.

Another pattern observed within systems is the development of 'attractors' (Byrne, 1998; Cilliers, 1998; Van Uden et al., 2001). These are described as regular pattern of behaviour, which are reinforced by their success over time. Often they become unnoticeable to the individual within the system, because of their taken for grantedness; they become routine. A useful description of this phenomenon is given by Van Uden et al., (2001) who describe an 'attractor basin' (2001p64) as a prototype of behaviour set by the organisation which sucks individuals into it. The strength of this phenomenon is such that it maintains conformity and thus the concept or illusion of

stability, rather then the chaos of individuals behaving in erratic and unpredictable ways.

Within the New Zealand maternity system, an attractor for midwives (and women) would seem to be birthing in a hospital. In 1999, over 90% of babies were born in hospital (MOH, 2001), even though over 50% of the midwives are not employed by the hospitals and the midwives are paid more to birth babies at home (MOH, 2001).

PRINCIPLES OF COMPLEXITY THEORY

Complexity theory would seem to provide a useful framework for systems analysis, yet I was unable to locate in the literature, a comprehensive list of the characteristics of systems/organisations viewed through the lens of complexity theory. While some of the authors, for example Byrne (1998), Cilliers (1998) and Campbell-Hunt (1998) identified many of these at some point, I decided to thematically analyse their descriptions of complex organisations along with those of other authors (Waldrop, 1992; White et al., 1997; Sherman & Schultz, 1998; Warren et al., 1998; Dimitrov, 1999; Dimitrov et al., 1999; Stonier, 2000; Arndt & Bigelow, 2000; Crutchfield, 2000; Van Uden et al., 2001) and develop a list of principles. During this process, I formed the view that these principles could provide a more applied reference point for analysis and critique of organisational aspects of maternity services in New Zealand, particularly as they impact on midwifery.

TABLE 2.2. THE PRINCIPLES OF COMPLEXITY THEORY

PRINCIPLES OF COMPLEXITY THEORY

1. All systems are interconnected, are mutually influenced by and have influence on their environment.
2. Description of systems and their elements (individuals and activities) are contextually derived because of the mediating influence of their history, experience and the role of the describer and perception of participants.
3. There is no correct or incorrect systems model as they are never static or able to be described as a whole/finite entity and the context will be different.
4. Constant change is an adaptive mechanism, vital for survival, the direction being influenced by the system's history and ability or pressure to apply/translate this knowledge to the current situation.
5. Communication fuels and shapes adaptation and evolution of the system.
6. Organisations/systems exhibit patterns over time and within their structure. These patterns can develop into attractors, which reinforce specific behaviours.
7. Multiple ways of knowing/viewing (perspectives) are normal and vital for survival. Heterogeneity enables contrasting interpretations of situations to be obtained and inventive solutions or responses applied.

Essentially, these principles represent the philosophical framework underpinning the following sections within the portfolio.

Complexity Theory and Research Potential

Complexity theory would suit a 'ground up' research methodology, recognising that the most powerful sources of change to an organisation are most likely to be found close to the area of interest, rather then distant from. The influence of the external environment on the response to change and subsequent emergent features, however, support a multi-method approach, in order to develop a more holistic view of the subject/object.

Interdisciplinary research is believed to be fundamental to the study of complex systems. Insights from both postmodernism and poststructuralism have informed systems models developed through complexity theory (Cilliers, 1998). Both quantitative and qualitative philosophical perspectives are recommended in order to explore complexity of human organisations.

Maternity services, indeed midwifery itself, as it has developed in New Zealand throughout the 1990's, has emerged as an increasingly complex organisation. The development of a theoretical framework informed by complexity theory has the potential to permit analysis of this dynamic evolution over time. Complexity theory enables multiple layers to be incorporated into the analysis, ranging from international economic influences through to the individual human interactions that occur at the organisation's 'coal face'. This approach has the potential to increase our understanding of organisations by 'moving our focus from local turbulence to a larger picture that promises to reveal underlying patterns' (Arndt & Bigelow, 2000p36). Using this framework, Campbell-Hunt (1998) described humans placed within a chaotic and unpredictable environment, as appearing to have the innate desire to create order and meaning. They tended towards self-organisation, which had the potential to become mercurial in nature, while looking for inspiration and leadership/direction. The experiences of the individuals seemed no different to that of the organisations within which they worked. This concept was referred to as 'fractal', meaning that features present at a microscopic level, tended to be representative of activities at the macroscopic level (Cilliers, 1998).

Arndt & Bigelow (2000), in a paper on the potential of complexity theory for health service management, foresaw a paradigmatic shift towards constituting 'a third way of dealing with new ideas' (Arndt & Bigelow, 2000p36). They suggested that these

theories represented opportunities for researchers and managers to challenge current thinking in health service management. These authors articulated within four broad categories the potential contribution complexity theory could make to the exploration and investigation of health care systems. The categories are discussed below.

Investigation into the cause and effect of organisational action

Firstly, the description of health care organisations as complex adaptive systems, has implications for the interpretation of activities occurring in these organisations and the actions they take. 'One hospital's attempts to control or respond to an opportunity could alter the environment for another' (Arndt & Bigelow 2000p37). For example, investigation into an increase in operative births within a local maternity system could be focused entirely on the tertiary facility where the operations take place. Lack of local knowledge by the investigator could restrict a wider review focus, who might then identify an inappropriate action to remedy a perceived 'problem'. If the birthing service was put into its community context, the increase in intervention may merely reflect the proper function of the tertiary facility. The intervention rate may merely be a reflection of a shift in birthing venue. An increase in women birthing normally at home or community primary birthing facilities, in a static birthing population, would consequently result in a recorded increase in intervention in the tertiary facility. This facility would only be seeing women who needed intervention. Attempts within the tertiary facility to control practice in order to reduce their intervention rates could have unintended consequences for the safety of local women birthing.

Investigation into survival management

Secondly, the concept of survival proposed by complexity theory challenges the notion of individual (system/organisation/group) identity as the organisation evolves, becomes more complex or is subsumed (Arndt & Bigelow 2000). How is survival defined and by whom? White et al., (1997) contended that 'in the evolution of organisational form, environmental selection does not over ride organisational choice' (1997p1395) and that internal evolutionary drivers and directors may actually govern this choice of evolutionary path more strongly than external factors. Identification of these drivers should be possible using this approach for analysis of the organisation.

Evaluation of outcomes.

Thirdly, complexity theory demands a rethink on how we define responsibility and evaluate performance in a dynamic system (Arndt & Bigelow 2000). Action at micro level can have a major impact on the system and conversely systems can exhibit stability at the macro level despite actions at the local level. To what degree could individual clinicians be held responsible for the outcomes of their work? 'Examining the

limitations of agency and control at all levels holds promise for discussing the very desirability of interventions and identifying where they can best occur and when' (Arndt & Bigelow, 2000p37). Complexity theory posits that unexpected events and outcomes are bound to occur, therefore, this reality must be factored into planning research design and method (Livesey, 1998).

Identification into patterns of change within health systems

Fourthly, the patterns that complexity theory postulates, underlay the behaviour of complex adaptive systems. These may become identifiable within the chaotic movements of health care organisations over time (Arndt & Bigelow 2000) with research aimed at this phenomena. Insights could be gained through the identification of patterns within and between organisations (Livesey, 1998) and the identification of attractors (Van Uden et al., 2001).

Complexity Theory as a Consciousness Raising Tool

The concept of complexity theory as a consciousness raising tool was suggested by Lissack (2000) who claimed that 'people decide and act in a given situation based on a model of thinking or paradigm identified as appropriate for the situation. Without a paradigm there will be no decision and no action' (Lissack, 2:2000). He believed that the language and concepts made available through complexity theory's use of metaphors, enable models to be developed for the processing of information to be used in decision-making and can guide action.

Description of Preconditions for Constructive Change

Warren, Franklin and Streeter (1998) claimed the value of complexity theory lay in its focus on the way in which local interactions between individual actors gave rise to a global system. Local interactions were believed to maintain the system through increasing its complexity, as the environment became more complex (1998p364). They felt it may be possible to anticipate the preconditions of rapid change. Complex systems, in which many factors interact in an asynchronous way, displayed unexpected, unpredictable behaviour, which increased the possibility of self-organising behaviour. Composite systems could evolve into a critical state through a minor event causing a chain reaction. A self-organising system tended to attempt to rebalance itself at a critical point between rigid order and chaos.

Critique of Complexity Theory

Some of the criticism that has been levelled at complexity theory can be categorised as follows.

Temptation to oversimplify

A key attraction of complexity theory is its recognition and analysis of the complexity of organisations as a whole. The traditional (modern) way of approaching complexity is to find a fixed point of reference or 'a master key from which every thing else could be derived' (Cilliers, 1998p112). A temptation faced by researchers and managers is the development of simplistic explanations for organisational behaviour and complexity theory can provide this. Cilliers (1998) argues, however, that 'the obsession with finding one essential truth blinds us to the relationary nature of complexity and especially the continuous shifting of those relationships' (Cilliers 1998p112). In reality, complexity theory would contend that neither the intention nor context of information is fixed enough to determine the correct meaning out of any single encounter or interaction. The representativeness of this encounter with others in the formation of patterns is more likely to be useful in the development of generalisations about a system as a whole (or part).

A 'theory of everything'.

This argument suggests that complexity theory satiates our innate desire to find a theory of everything; a metatheory (Campbell-Hunt, 1998; Cilliers, 1998; Crutchfield, 2000). Campbell-Hunt (1998) preferred to describe complexity theory as 'a new body of ideas that delivers theoretical consistency across an enormous scope of strategic enquiry' (1998p35). Crutchfield (2000), who was also irritated by the claim that complexity theory is just a new fad, further supported the concept that it was merely a repackaging of ideas. He was able to identify quite clearly at least three major fields of theoretical inquiry, within the key principles of complexity theory, that stretched over a number of decades demonstrating that complexity theory had a very eclectic past.

For example, dynamical systems theory, which explains the randomness of deterministic chaos, had investigated the phenomenon of chaotic states 'for decades' (Crutchfield, 2000). Statistical mechanics and phase transition theory were involved in studying the emergence of 'co-operative systems' in the early 1950s (Crutchfield, 2000), contributing to the emergence of complexity theory. Pattern theory, explaining the emergence of patterns in spatial processes, also has a long history in science (Crutchfield, 2000) and is a contributor to the evolution of complexity theory, particularly the development of attractors.

These theories, and the researchers using them, span many disciplines. The evolution of complexity theory out of a number of varying theoretical concepts and disciplines actually support the complexity theory paradigm. The advent of electronic

communication may well have played a major part in enabling the linkage of these apparently disparate fields of inquiry to form the backbone of complexity theory. Berreby (1998), in contrasting chaos and complexity theory, claimed the latter was grander and vaguer. However he pointed out the potential for further development of the principles of the science, as 'chaos theory has become too neat to represent the messy world' (Berreby, 1998p3). It is the application of complexity theory concepts to organisations, such as health systems, that is new and appears to be growing[12].

Use and abuse of the language and metaphors

Pierce (2000) in reflecting on the place of complexity theory in the health care environment, expressed concern that the language and metaphors favoured by authors and theorists supporting this theoretical perspective, were merely being used to 'buttress old ways of *managing health care*' (Pierce, 2000p39). Arndt & Bigelow (2000) also expressed this concern. They cited the appropriation of new language by total quality management initiatives in hospitals, as a prime example of this risk of transposing new language on old meanings and behaviours. Words such as evolution, emerging and attractors, would likely have different meanings for those not familiar with complexity theory.

On a positive note, Pierce (2000) a physician, believed that the concepts of adaptation in response to (or as a cause of) change, and the provision of tools to look at the issues of uncertainty, disagreement and unexpected outcomes, offered more than most recent theoretical perspectives into the paradoxes found in health care management. Complexity theory asks the question 'How can we make sense of our experience of life in organisations?' rather then 'How can we design our organisations to have better outcomes?' Allowance to focus on individual behavioural responses could be seen in a positive light; 'when individuals are confused, uncertain and disagree, creative juices begin to flow' (Pierce, 2000p39). Furthermore, 'identification of intolerable situations provide wisdom needed for strategic moves and are important as an early part of the analysis needed in the ongoing evolution of the organisation's strategy' (Pierce, 2000p39).

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[12] Evidenced by a series of articles in the British Medical Journal (Fraser & Greenhalgh, 2001; Plsek & Greenhalgh, 2001; Wilson & Greenhalgh, 2001)

CONCLUSION: THE COMPLEXITY OF COMPLEXITY THEORY

Complexity theory itself provides a good demonstration of the characteristics it claims organisations exhibit. The theory has evolved over time and adapted following critique in various disciplines and extended its application to others (self-organising).

As it is more fully explored and described, it becomes larger and more complex, absorbing previously 'stand alone' theories within it (chaos theory is a good example). The eclectic nature of the theory and heterogeneity of researchers and writers investigating its potential add to its complexity. While there are earlier examples of application of this theory in analysis of health care systems and organisations (Cilliers, 1998; Byrne, 1998) more recent literature indicated that the principles of complexity theory were being applied to enable a greater understanding on health care organisations in order to strategise future development. (Mycek, 1999; Ashmos, Huonker & McDaniel, 1998; Bazzoli, Shortell, Dubbs, Chan & Kralovec, 1999).

A review of the literature undertaken for this paper, pointed to the need for more research on how interacting components co-operate to produce large-scale co-ordinated structures and subsequently how interacting components manage to self-organise in times of environmental stress. Those who have worked in management within the health care system will probably understand this desire. Researchers are using powerful descriptive metaphors derived from such varied areas as ecology, statistical mechanics, pattern theory, chaos theory, psychology, computer science and systems theory (Crutchfeld, 2000; Arndt & Bigelow, 2000; Lissack, 2000) to translate directly into systems involving human interaction. The applications of the principles of complexity theory to the analysis of the maternity 'system' in New Zealand and the place of midwives appears to have potential to add to the midwifery body of knowledge.

This theoretical framework provides a platform from which to launch into a more detailed analysis of how midwives have managed and made sense of the complexity of the turbulent New Zealand health service environment that we have lived with over the past thirteen years. The following parts of this portfolio demonstrate the application of the complexity theory principles in both the development of a methodology for organisational analysis and as a tool for critiquing and reflection on research findings.

REFERENCES

Ashmos, D., Huonker, J. (1998). Participating as a complicating mechanism: the effect of clinical professional and middle manager participation on hospital performance' in *Health care management review.* (23) Issue 4 p7-20.

Arndt, M., & Bigelow, B. (2000). The potential of chaos theory and complexity theory for health services management. *Health Care Management Review* (20) 1: p35-41

Bazzoli, G., Shortell, S., Dubbs, N., Chan, C., Kralovec. (1999) A taxonomy of networks and systems, bringing order out of chaos. *Health Services Research (33) Issue 6 p683-1717.*

Berreby, D. (1998). Complexity theory: fact-free science or business tool? *strategy.Management.Competition* (I). p1-98
http://www.Strategybusiness.co/strategy/98104

Byrne, D. (1998). *Complexity theory and the social sciences: an Introduction.* London: Routledge.

Campbell-Hunt, C. (1998). Complexity a theory of everything for strategy and strategising? *New Zealand Strategic Management.* Spring 1998 p34-38.

Campbell-Hunt, C. (1999). Complexity the implications for strategy and strategists. *New Zealand Strategic Management* Winter 1999 p13-23.

Crutchfield, J. (2000). *Comments on complexity and the future of science.* http://www.santafe.edu/users/jpc/SciAmPublic.html

Cilliers, P. (1998). *Complexity and postmodernism: understanding complex systems.* London: Routledge.

Dimitrov, V. (1999). *Decision emergence out of complexity and chaos. semiotics and complexity.* http://members.tripod/vlad_3_6_7/decision-making-in-complexity.htm

Dimitrov, V., Hodge, B., Khun, L., Woog, R. (1999) *Chaos and complexity and creativity and contemplation.* http://www.hawkesbury.uws.edu.au/faculties/socialinq/complexity/chaos.htm

Earl, D., Giobson,E., McCara-Couper, J., McGregor, B., & Thwaites, H. (2002). Core midwifery: the challenge continues. *New Zealand College of Midwives Journal* (27) P30-32.

Fraser, S., & Greenhalgh, T. (2001). Coping with complexity educating for capability. *British Medical Journal* (323) p799-803.

Grobstein, P. (1997) .*Insights from complex systems.*

http://serendip.brynmawr.edu/complexity/complexity.html

Guba, E., & Lincoln, Y. (1995). Competing paradigms in qualitative research. N. Denzin, N., & Lincoln, Y. (Eds) *Handbook of Qualitative Rresearch.* Thousand Oaks, Ca: Sage.

Health Funding Authority. (1996). *Notice pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand.

Health Funding Authority. (1998). *Notice pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand.

Higginbotham, N., Albrecht, G., & Connor, L. (2001). *Health social science: a transdisciplinary and complexity perspective.* Melbourne, Australia: Oxford University Press.

Kenny, S (1994) *'Theoretical Foundations' in Developing communities for the future: community development in Australia.* Australia: Thomas Nelson.

Lissack, M. (2000). *Mind your metaphors: lessons from complexity science* http://www.lissack.com/writings/longra.htm

Livesey, B. (1998). The accidental theorist. *Canadian Business.* (17) n19.

McKissock,D., & McKissock,M. (1998). *Bereavement counselling: guidelines for Practitioners.* Australia: The Bereavement C.A.R.E. Centre.

Mycek, S. (1999).Teetering on the edge of chaos. *Trustee* (52) 4 p10-18

Ministry of Health. (2000). *Report on Obstetric Interventions 1990 -1999* Wellington, New Zealand.

Ministry of Health. (2001). *Report on maternity 1999.* Wellington, New Zealand.

Ministry of Health. (2002). *Maternity services: notice pursuant to Section 88 of the Public Health and Disability Act 2000.* Wellington, New Zealand.

New Zealand Government (1990) *Nurses Amendment Act.* Wellington, New Zealand.

Pierce, J. (2000). Is Complexity theory just another 'fad' as it relates to health care organisations? *Health Care Management Review.* (25) 1p39-47

Plsek, P., & Greenhalgh, T. (2001). The challenge of complexity in healthcare. *British Medical Journal (*323) p625-628

Sherman, H., Schultz, R. (1998). *Open boundaries: creating business innovation through complexity.* Massachusetts: Perseus Books.

Stonier, R., & Yu, X. (2000). Introduction to complexity theory. *Complexity International* (2). http://www.csu.edu.au/ci/vol2/intro942.htm

Van Uden,J., Richardson, K., & Cilliers, P. (2001). Postmodernism revisited:

Complexity science and the study of organisations. *Journal of Critical Postmodern Organisation Science* Las Cruces

Waldrop, M. (1992). *Complexity: the emerging science at the edge of order and chaos.* UK. Simon & Schuster.

Warren, K., Franklin, C., & Streeter, C. (1998). New directions in systems theory: chaos and complexity' in *Social Work. (* 43) 4 p357-372.

White, M., Marin, D., Brazeal, D., & Friedman, W. (1997) The evolution of organisations: suggestions from complexity theory about the interplay between natural selection and adaptation *Human Relations. (*50)11p1383-1410.

Wilson, T., Holt, T., & Greenhalgh, T. (2001). Complexity and clinical care. *British Medical Journal (*323) p685 – 688.

Part Three:

DEVELOPING METHODOLOGY THE DEVELOPMENT AND APPLICATION OF CONTEXTUAL SCANNING AS A TOOL FOR ORGANISATIONAL ANALYSIS

CONTEXT

This paper was written one year after I had developed and written up the complexity theory framework located in Part Two of this portfolio. I had recently moved from my lecturing position at Victoria University in Wellington to a similar postgraduate midwifery teaching role at Otago Polytechnic in Dunedin in the School of Midwifery. I remained living in Christchurch, a 60 minute flight, or five hour drive north of Dunedin.

My own life had also become more complex. As well as my part-time position in Dunedin, I commenced a part-time contract with the Ministry of Health. This included managing maternity contracts in the South Island of New Zealand and a continuation of service reviews for the Disability Section of the Ministry. I also remained lead auditor for nursing and midwifery education programmes for the Nursing Council of New Zealand. In my family life, I became a grandmother for the first time. The combined experiences provided me with more insights into health services, particularly in the South Island.

An interesting observation made during these activities, was the wide interpretation given to generic contract specifications or service guidelines. This was regardless of whether I was reviewing a curriculum against the Nursing Council Guidelines and legislation, or auditing a service against national specifications. The actual context, meaning its geographic location, its history and the people involved in managing the service, seemed to have a profound influence on the way that the service specifications or guidelines were interpreted and the service delivered. There seemed to be an expectation that the consistency of a service could be determined by a generic written specification, in some form of a contract, that did not recognise the idiosyncrasies of the localities in which they were expected to operate.

For example, the facility, or maternity hospital services specifications (MOH, 2000), provided guidelines for the provision of hospital-based maternity services, while Section 51 of the Health and Disability Services Act,1993 (HFA, 1998) described in detail the type of service to be provided by a midwife or doctor to a childbearing

woman. My work with the Ministry of Health, as a midwifery lecturer and as an observer at NZCOM National Committee meetings, provided me with an understanding that the nature of the services delivered varied greatly throughout the country. It seemed that the context (the environment) of service provision had a profound impact on the type of care women received and I was keen to explore this more, but needed to find a way or tool to enable this process. This part of the portfolio explores my serendipitous discovery of just such a tool based on environmental scanning (Boehem & Litwin, 1999; Beal, 2000) which I modified and came to refer as contextual scanning.

The development of this tool, was not part of a research process. It was generated out of an endevour to work with students and colleagues to gain a better understanding of the differences in midwifery and maternity service configurations that had evolved over time in various parts of the country. We were looking for a concrete way of cataloguing maternity service patterns in various locations to gain a picture of their differences and similarities.

INTRODUCTION

Complexity theory recognises that organisations are living systems, which have been created by and in turn, have influence on those living systems within them; human beings. It argues that human behaviour is a microcosm of organisational behaviour, which in turn is a microcosm of the behaviour of larger ecological systems (Byrne, 1998; Campbell-Hunt, 1998, Dimitrov, 1999; Dimitrov, Hodge, Khun & Woog 1999).

The maternity system in New Zealand over the last ten years has become more complex[1]. As particular aspects of this system are explored to gain greater understanding, the more complicated and inextricably linked to other element of the system they appear. The geographic location of the service, demographics of the catchment population, the health service staff mix and traditional roles of medical practitioners in maternity care, all seem to determine the service characteristics. The perception of the health services are further complicated by the 'framing' that participants apply, based on their relationships within the system, their previous experiences and their current position. It is within this context that complexity theory was found to provide a useful framework to guide scanning process and analysis.

This paper explores the adaptation of this scanning process to explore midwives' development of maternity services in rural and primary health settings. Application of

[1] Refer to Part One of this portfolio.

the principles of complexity theory to further develop this process into a tool will also be discussed.

ENVIRONMENTAL SCANNING

Environmental scanning appears to have been utilised primarily within the disciplines of architecture and town planning (Beal, 2000). Research into patterns of planning activities by Boehem & Litwin (1999), indicated tendencies to implement plans based on traditional discipline-specific knowledge rather than new knowledge. Scanning, which provides a topographic overview of an organisation or community taken at a point in time, was developed to enable updated and contrasting information to contribute to an evaluation and planning process. This process recognises the time-bound nature of data-gathering within settings which include human interaction and the importance of context on findings, including the knowledge, experience and history of the data gatherer, informants and interpreter (Boehem & Litwin 1999).

Within the area of community planning, environmental scanning has been used as a method of assessing internal and external surroundings and forces at work within the various contexts in which people live and work. The process enables the alignment of planning strategies with environmental needs. Applied to community planning, this scanning method allows a multidimensional view to be obtained by encouraging a focus on the whole context of the community including:

- changing population and demographics,
- political, social and ecological changes,
- workforce patterns,
- changing technology and the information explosion,
- the world economy (modified from Friedel, 1992).

Further developed by business strategists (Correia & Wilson, 2001; Mayrhofer, 2001), the scanning of both tasks and the general environment allows businesses to learn about the opportunities where they may be able to position themselves for advantage and conditions or events that threaten their performance or survival. This enables the formulation of competitive strategies congruent with critical environmental conditions (Beal, 2000; Lobel, Googins & Bankert, 1999).

This type of scanning helps identify current and potential trends, threats and opportunities when undertaking strategic planning and evaluation (Peterson, 2000; Beal, 2000; Boehem & Litwin,1999) . Scanning also provides a useful benchmarking

method; comparing an earlier scan of an organisation with a more recent one, to identify and plot change (Hatch & Pearson, 1998; Mayrhofer, 2001).

The principles of environmental scanning, therefore, seem to have been applied within a variety of settings. Hatch and Pearson (1998) described the use of this method in educational needs assessment. Mayrhofer (2001) evaluated its use in plotting career development trends and Cufaude (2001) described the method as a tool for identifying and cultivating new leadership within organisations. Environmental scanning seemed to be a very adaptable, efficient and eclectic tool, which did not seem to have any particular disciplinary allegiance or specific validity issues.

The application of environmental scanning to the health sector.

The health literature identified a paucity of information on the use of environmental scanning methods. Of those papers published, however, some interesting applications were reported, for example, an investigation by Emery, Praveen, Hindin and Riskind (2001) into the development of partnerships between academic medical centres and rural communities, used environmental scanning to strategise the process. The American Dietetic Association have written extensively on the application of this method to analyse their patient population (Fox, Brummit, Wolf & Abernethy, 2000) and environmental scanning used to assess the learning needs for health professionals is described by Hatch and Pearson (1998).

Each of these examples defended the use of scanning in terms of the need to capture a broad range of data from a number of sources over a short period of time. This appeared particularly useful when the organisation under investigation was quite complex and interfaced with a number of others. The short time frame for data collection and analysis enables results to be produced and decisions for action made before the contextual or environmental determinants changed too much. It was claimed that a long time lag between a scanning 'picture' of the services and agreed action could render those actions ineffective or dangerous because of a shift or reconfiguration of the context in the meantime (Fox et al., 2000).

The Significance of the Practice Context in Analysis of Maternity Service Provision

Complexity theory allows one to conceptualise complex organisations, such as hospitals, health services and professional organisations, as constantly evolving and changing within a dynamic environment which constantly tests their ability to survive. A summary of the main principles of complexity theory which I have distilled and appears

below, is informed by the work of Waldrop (1992), White, Marin, Brazeal and Friedman (1997), Byrne (1998), Cilliers (1998), Dimitrov et al (1999) and Campbell-Hunt (1999). It provides a useful framework for organisational analysis. The implications of these principles for gathering data will now be explored.

1. *All systems are interconnected, mutually influenced by and have influence on their environment.*

This principle questions the notion that an organisation can be viewed in isolation from its surrounding environment, or that part can be viewed in isolation from the whole. The context, or external environment of an organisation, critically distinguishes one organisation from another. Multiple sources of data will be needed, both from within and external to the organisation to analyse the system and its parts.

2. *Description of systems and their elements (individuals and activities) are contextually derived because of the mediating influence of their history, experience, and the role of the describer and perception of participants.*

This principle is interpreted as meaning that one participant's view of a situation is very likely to be different from another's. The inevitability of this is related to the belief that there is no actual truth, rather, each person's view is their own truth. The positioning of an informant within the context of an organisation, their experience within it and their relationship with its external environment, all contribute to their own reality of a situation or context. The best that could be hoped for, when investigating aspects of the organisation, would be the emergence of themes and agreed features from variously sourced view points in order to construct a description of the organisation for analysis. Analysis undertaken in a scanning process, values and learns from difference and does not require sameness of response (Fox et al., 2000).

This method enables viewing of the function of an organisation and its parts through data gathered collectively, recognising the participants' positioning within the context of the organisation. Information gathered using a consensus process, like a focus group, where common agreement about features would be arrived at, or a number of individual's perceptions of the organisation could be compared to determine common themes, would be in keeping with this principle. The role of the reviewer or interpreter of results would also be critical as they would be susceptible to the same biases as the informants. The rechecking with informants by the reviewer to arrive at agreed views and also differences would be necessary to achieve validity in the eyes of the informants (Correia & Wilson, 2001).

3. *There is no correct or incorrect systems model as they are never static or able to be described as a whole/finite entity and the context will be different.*

Ideally, given this principle, description of the organisation should be obtained within its environmental context at one point in time as quickly as possible, before the environment and/or the organisation changes significantly. A scan method is generally quick and can be repeated to gain a perspective on the degree of change an organisation has undergone (Peterson, 2000) over time. This method used at a variety of sites, would have the potential to identify the diversity of organisational models from those which are thriving through their ability to adapt and evolve, to those on the brink of extinction (Corria & Wilson, 2001).

4. *Constant change is an adaptive mechanism, vital for survival. The direction being influenced by the system's history and ability to apply/translate this knowledge to the current situation.*

Placing the organisation within the broader context of the community may assist in understanding systems failures as not necessarily emanating solely from the organisation itself, but rather from the combination of an adverse environment and a maladaptive organisation. A community focus may point to features that the organisation is having most difficulty adapting to, highlighting measures the organisation could take to adapt better to its environment, rather than expecting the environment or community to adapt, or isolating itself from the community.

This principle implies the need to capture data on the development of the organisation over time and information on features of its external environment. Scanning is more likely than most research or investigative methods to capture the dynamism and reflect movement and change.

5. *Communication fuels and shapes adaptation/evolution.*

The mechanisms of communication both leaving and entering an organisation will need to be viewed. The degree of separation between parts of the organisation through which communication travels and the ease with which this occurs should indicate the potential for adaptability of the organisation. Written records and publicity material also provide information, which can add to the richness of the data gathered. Both Freidel (1992) and Correia and Wilson (2001) identified the value of environmental scanning as a tool for enabling the complexity of an organisation to be demonstrated through multiple sourcing of data.

6. *Organisations/systems exhibit patterns over time and within their structure. These patterns can develop into attractors, which reinforce specific behaviour.*

A data-gathering method, based on this premise, requires the ability to expose patterns of behaviour, over time and/or among systems and/or their parts. Multiple perspectives and collection of data from a variety of systems or parts of a system should meet this objective. The fractal nature of complex organisations (Van Uden, Richardson & Cilliers, 2001), meaning the similarities within parts that reflect characteristics of the whole, imply data from parts of a system are likely to be sufficient to enable features of the whole to be identified. This notion would support investigation of a sample of the organisation, rather than an attempt to identify and investigate the whole. Complexity theory, in fact argues, that the notion of a 'whole', 'complete' or 'separate' organisation is a paradox.

7. *Multiple ways of knowing/viewing (perspectives) are normal and vital for survival. Heterogeneity enables contrasting interpretations of situations to be obtained and inventive solutions or responses applied.*

The experience of a combination of individual and collective data-gathering process should alert participants to the level of complexity of understanding that colleagues have of the organisation they all work within. The processes should not indicate that there is a right or wrong way of viewing, it should just enable the recording of the views (Friedel, 1992). The interactive process of interpretation that individuals experience during such a process, should highlight for them common areas of interest and/or concern that could focus them collectively on actions that they could take to bring about some constructive change (Mayrhofer, 2001).

THE DEVELOPMENT OF THE CONTEXTUAL SCANNING PROCESS

While the literature provided a skeletal outline of what may constitute the elements of a useful environmental scanning process, the detailed development of the contextual scanning methodology outlined in this part of the portfolio, was guided primarily by the principles of the complexity theory framework. Following exploration of complexity theory and the initial writing up of the theoretical framework which became Part Two of this portfolio, I was involved in the development of a postgraduate midwifery course. One specific module was aimed at working with students through a process of reflection on their working environment, including the identification of practice patterns. I required a tool that provided the students[2] with a comprehensive framework through

[2] These students were all practicing midwives, 2/3 self-employed providing LMC services.

which to create and view their service within its community context. I wanted an identical data-gathering process to be used in different localities, with different groups of midwife students, in order to establish similarities and differences in service structure and delivery. I was keen to see how these different groups of midwives, in the same or different localities, described the maternity system they were part of and make sense of the patterns. I used the concepts from environmental scanning to develop this exploratory process, which is described below. The contextual scan was born out of my desire to develop a reflective learning tool for practicing midwives to examine the organisation of their practice with.

The Initial Contextual Scan Process with students

The initial scanning sessions were run concurrently in two cities 500kms apart. The complete session took each group about four hours. In each location the midwives were separated into small groups based on their location and type of practice (rural, urban, core (employed), continuity (self-employed). Each group was provided with overhead transparencies on which to enter the agreed responses of their group to a set of written questions (given below). The answers were often arrived at through a consensus process within the small group, contributing to lively discussion and critique. After each set of questions, the groups came together to share their findings with each other. This process was repeated during the four data-gathering stages of the scan. The results produced a mosaic of services provided within the unique contexts of the communities in which these midwives lived and worked.

A set of resources were also provided for the midwives to use in responding to the questions, such as basic census information, maps, health board annual reports, health workforce data, birth volumes and outcome data, all obtained from public sources. Many of the midwives were not even aware that such information would be useful, but during the process, they quickly learned their value.

THE PHASES OF THE CONTEXTUAL SCAN

1. An initial broad description of the maternity service and the location and role of the informant practitioners within the service was requested.

This set of questions represented the first stage of the scan process. They were designed to obtain a brief overview of the maternity services provided in the locality. This seemed to be a natural place to start when inquiring about maternity services in a community. It also seemed a safe place to start for informants who may not have worked together as a group before.

Informants[3] identified themselves and their relationship to the service. A systematic description of the maternity/midwifery service and its components was necessary to position themselves as describers.

This included:

- clarification of the role and function of their local maternity service as a whole within the geographical population it served,
- maternity care arrangement options for women including the mix of health professionals and their responsibilities in the locality,
- description of specific services they offered within this including the role of the core and continuity midwives in this context,
- the various staff involved in maternity service delivery and how they interfaced with each other and the informant(s),
- methods and place of care delivery, e.g. home based/mobile or hospital-based,
- volumes of activity their practice or part of the maternity service provided over the previous twelve months including individual caseloads,
- the degree of interface with non-maternity service providers and services.

Participants also had the option of drawing a map of these services demonstrating the links.

2. Assessment of the trends and issues that have the potential to influence their practice and the need for their services within the broader community context.

The next stage required the midwives to refocus on their community. The value of the group was appreciated at this point, because the deficits in individual knowledge of their community seemed to surprise the midwives. The differences in response between urban and rural, employed and self-employed became most stark in this stage. The responses to this section relied on information that informants already knew aided by an assortment of local demographics and workforce data gained from local publications and the census provided as part of the course readings. This section generally highlighted for the informant(s), how little they really knew about the demographic features of their own practice environment.

[3] At the time of scan development, the informants were practising midwives taking part in a

A framework was developed to assist with this process, which included:

- **Geographic/demographic factors:** The informant(s) identified the key geographic features of their region and the population they serviced in relation to their impact on maternity service provision. Included within this was comment on population density and make-up, ease of access to services and clients, impact of the weather and location of the main medical, maternity and social support services in relation to the facility.

- **Sociocultural factors:** The informant(s) briefly described the social and cultural features of the people in the community where they worked or in which their service was located. Included were such factors as ethnicity, level of family support networks, transient nature of the population, health and well-being of the population and fertility levels. Just the main trends or obvious features were required.

- **Economic factors:** The informant(s) were asked to describe the ways in which such features as employment levels, cost of living, socio-economic status and the costs of service provision in the locality influenced their practice and impacted on women and their families.

- **Political factors:** Relationships with and between health service providers, the community interest in maternity services and intra-professional rivalry were focused on in this part of the scan.

- **Technological factors:** Informant(s) were asked to comment on the influence of technology on their facility and their practice. This included communications technology, access to intervention and diagnostic services, and consumer expectations in this regard.

- **Health Service Development at the national level:** The informant(s) were asked to briefly identify both the positive and negative impacts of health service development over the previous 5 – 10 years on their maternity service provision in their area and their own practice. They were asked to reflect on the impact locally.

- **Midwifery professional development at the national level**: Views were sought on the most important features of these developments which had enabled them to

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postgraduate midwifery course.

provide a midwifery services to local women. They also identified perceived weakness in this development locally, such as lack of support from the College of Midwives or lack of access to professional development activities.

3. Assessment of the trends and issues that have the potential to influence their practice and the need for their services within the local health service setting.

This part of the scan required the informant(s) to refocus onto their local maternity service. This phase was expected to enable the informant(s) to revisit their service with the hindsight of information on the community context gained in the previous phases of the scan. An unexpected by-product of this process for the informant(s), was their view of their service in a way that they had never seen it before.

Informant(s) were asked to assess the trends and issues as well as the threats and opportunities that they believed had the potential to influence their practice and the need for their services within the *local maternity setting.* A framework was also provided to assist with this. The informant(s) were also asked to outline how these aspects influence positively and/or negatively on the quality of the maternity services provided and how they may inhibit midwifery practice.

- **The role of consumers:**

Informant(s) outlined the role consumers played in the support and development of midwifery and maternity services provided locally. The potential for consumer involvement was also gauged as well as the barriers to their input.

- **The physical features of the facility:**

The appropriateness of the maternity facility or hospital, from a physical point of view, was described including the layout, ease of access, adaptability and aesthetic features.

- **Management and administration of the service:**

The inter-relatedness of the maternity services with other local health services was described. This included identification of budget holding for maternity services, the influence of medicine and nursing on the functioning of service and the recognition given to birth as a normal healthy process in policies and procedures. Were they generic or specific to maternity?

- **Staffing and workforce issues:**

In focusing on workforce issues, the informant(s) were asked to gauge the impact on maternity services by such issues as midwifery staff shortages and inappropriate use of staff. Local health service staffing mix, length of service, age range and adaptability of staff was also described.

- **Interprofessional co-operation:**

Discussion here was centred on the relationships between staff including employed and self-employed, medical and nursing at a clinical level.

- **Technology/equipment:**

The presence or absence and functioning of technology and equipment wassessed by the informant(s).

- **Education and training:**

Informants described access they had to these professional development activities, their quality and the local level of support for these activities. Priorities for education were also identified.

- **Health services development:**

Changes, adaptation and redevelopment of the health services in the locality were identified and the repercussions discussed with reference to their potential/actual influence on the maternity services.

- **Midwifery professional development:**

The impact of midwifery professional development locally was also explored both in terms of how this supported or should support the service midwives provide/should provide.

4. In the final phase, informants were asked to summarise the findings by identifying and prioritising any key issues they had identified during the previous stages.

This stage of data-gathering required the midwives to use the previous information more strategically. For many midwives this was an unfamiliar activity. This required an overview of the significant findings of the scan (in the view of the informants) and then agreement on areas that were of greatest risk to:

⇒ the future of their practice

⇒ midwifery services generally

⇒ the availability of safe, accessible midwifery services to local women with the potential to maximise normal and natural births.

The process concluded with the development of an action plan of some description, either for individual midwives or for their regions to work collectively on.

On completion of this process, the sets of transparencies from each of the sections were transcribed by the facilitator (lecturer) for distribution back (and correction if necessary) to the students at the next seminar. A specific grid was developed into

which a summary of findings was inserted for each stage (four grids in total for each group). Each group had their own set of four grids, which could be super imposed on the other's grids to determine the difference and similarities in perceptions students had about the same aspects of the maternity services and their environments in their cities. The variances were always a surprise to the students.

Table 3.1 below, demonstrates the make-up of the grid used to summarise the findings of the various phases of the scan. This was the format in which the scan results were returned to the informants for checking. The layout also made identification of patterns easier, because the data was captured in an identical way from each scanning episode and each group.

TABLE 3.1 CONTEXTUAL SCAN FRAMEWORK

Phase 1: Scope, role and function of the local maternity service.

Maternity Service	**Role**	**Volumes**	**Specific arrangements**	**Current issues**
Services Provided	Antenatal Education Primary birthing and postnatal services. Referral & back-up Postnatal only services.			
Employed Midwives	Roles & Shifts Salary & back-up.			
Self-employed midwives Doctors	Care provided. Back-up required & utilisation.			
Emergency back-up	Private/public Obstetricians. Pediatricians. Transfer to tertiary.			

Phase 2: Maternity Service External Contextual Scan

Assessment of trends and issues, threats and opportunities that have the potential to influence the development and need for services within the broader regional (and national) context.	
Socio-cultural	SES and cultural issues.
Geographic Demographic	Features of the locality & community.
Economic	As they relate to the population & health service provision.
Political	Inter practitioner relationships Issues relating to the community size and traditional 'ways'. Perception of 'risk.' Relationships with other facilities.
Technological	Influences of communication and information systems. Availability/expectation of 'mobile' equipment.
Health Services Development	Changes over the last 5 years and causes. Support for the services. Competition. Funding for services. Impact of national directives.
Midwifery Professional Development	Types of care offered. Relationship between employed and self-employed midwives. Involvement in education and research.

Phase 3: Maternity Service Internal Contextual Scan

Assessment of trends and issues, threats and opportunities that have the potential to influence the development and the need for services within the local maternity setting.	
Consumers	Referral points. Support/involvement.
Facility	Location, type, catchment, suitability.
Administration	Service management structures. Monitoring of service.
Staffing Workforce	Employed staff/staff mix. Skill, experience and qualifications. Remuneration.
Intraprofessional co-operation	Interface with other providers.
Education and training	Impact of professional isolation. Support for changing roles.

Phase 4: Key Strategies For Improving The Service

ISSUE	GOAL/AIM	PROCESS
Key issues identified	Goal or aim identified	Process to achieve the aim identified.

Reflections on Results of the Initial Scanning Process

Students were encouraged to explore their responses to the scan questions with others, but to recognise that interpretation is an individual activity and that it is normal and acceptable to see things differently from others. They were assured that there would be no right or wrong descriptions. This philosophical underpinning seemed to make the environment of the classroom safe for disclosure. Throughout the development of this exercise for postgraduate midwifery students, the process produced some startling results. For example;

1. Terminology that each used, such as *continuity of care*, was defined differently by the different groups. Within each of the groups the terminology had a shared meaning, but a difference was noticed between the groups. The description of components even so basic as *postnatal midwifery care* seemed also to differ between the groups.

2. Even when the midwife students worked in the same city and used the same hospitals, the groups described the hospital service differently, depending whether they were working in them or were based in the community. When invited to draw the health system in their community, the community-based midwives consistently drew a picture of a town with hospital, women's homes, the doctor's surgery and the midwife's car. While the hospital-employed midwives' drawing was completely different. They gave a cross-sectional view of a hospital with the wards laid out and various rooms labelled. This was even though they were each presented with the same set of questions in the exercise.

3. When comparing between the groups, the midwife students seemed to have different populations of people they serviced, yet thought they shared a similar clientele. Descriptions of the population and demographics varied greatly between groups even though some lived in the same city. Clearly many of these midwives ended up with a fairly homogenous group of clients (self-employed midwives in New Zealand do not have restrictions imposed on the location(s) of their practice).

4. Some self-employed midwife students managed their interface with the hospital differently from others. The hospital seemed to have different expectations of some midwives over others. Length of service and place of 'training' still seemed to privilege some midwives over others.

5. Midwife students had not previously articulated their work and professional relationships in such a 'deconstructed' and systematic way.

6. The students were also surprised at the commonalties among the three groups previously almost 'at odds' with each other.

7. The level of communication between these groups seemed to continue beyond the classroom and there were some interesting strategies developed collegially.

These sessions also produced some interesting benchmarking material, including:

- comparative data demonstrating inter regional differences in midwifery workloads, workforce mix, work patterns, intra professional relationships, practice configurations, and case-load volumes,
- the differences geography, population demographics and socio-economic status of women appear to have on midwifery practice patterns,
- the variety of ways midwives navigate their way through the complex maternity system as advocates for women in the delivery of maternity care,
- exposure to different regional strategies for organising service delivery and practice arrangements.

Overview of the Contextual Scanning Process

The midwife students felt that this process enabled them to put their frustrations in perspective and start to look at more fundamental causes of service delivery problems they experienced within their areas of practice. The systematic scanning process seemed to enable them to depersonalise problems and work together on solutions.

The predominance of a desire for woman-centred care and to maximise the continuity of midwifery care, seemed to galvanise the groups and leave them with a sense of camaraderie. This was particularly notable among core and continuity midwives from the same locality. They seemed to be able to view the services from the others' perspective. The midwives seemed to feel re-energised and better informed about the problems they faced.

Following the experiences in application of this process with students, the scan tool was refined. The contextual scanning process seemed to work on two levels. Clearly, the process gave the informant a different perspective on their practice setting and for some, on the nature of their practice. Also when the individual perceptions were amalgamated, it provided a multidimensional view of the midwifery services within their context. With this in mind, the process was reviewed and reshaped with each application in the teaching and learning environment.

It seemed most appropriate for the informant to move through the scan process in a consistent way, in order to gain a more systematic and ultimately comprehensive view of the organisation of their practice, within its community context. This required the development of distinct phases, which were clarified over a period of time by the postgraduate midwife students engaging in the process as a practice development exercise. Incidentally, this exercise was moved to an earlier part of the course to fulfil two key functions. Firstly to get students to know each other better and understand each other's perspective. Second, it assisted students decide on a local service development project to undertake for their major assignment.

The amount of information accumulated through this process seemed huge. Initially the students were tempted to provide too much detail. Scans are not intended to be very detailed, but brief, providing a topographical overview (Boehem & Litwin, 1999; Beal, 2000). The role of the facilitator was important in ensuring that the group moved through the questions and did not get bogged down in the detail. The allocation of time frames to each phase of questions was important. This also assisted the collective decision-making process, with the achievement of consensus pressured by time. Natural leaders seemed to develop within the group to keep colleagues on track. The facilitator needed to ensure that this person did not dominate the decision-making. It was also advisable not to have this person as the scribe to reduce the risk of gaining a sanitised version of the group responses. The written responses were expected to be given in brief statements or 'bullet point' form under each heading of the scan questions and frameworks (refer to Table 3.1 on page 96).

Development of the Scanning Process for Research Data-Gathering

Following the development of scanning as a teaching and learning tool, its application as a methodology guiding the development of a more formalised data-gathering and

analysis process became apparent. As part of its refinement, the scanning concept was compared for fit with the complexity theory principles that I had developed earlier in my professional doctorate[4] .

A framework for analysis of complex systems
The complexity theory principles provide a useful framework to reflect on the applicability of scanning as a tool for data collection and analysis of complex systems.

1 *All systems are interconnected, mutually influenced by and have influence on their environment.*

The scan enabled both the internal and external environments of the system to be examined in order to obtain a contextual picture of the organisation. Phase two and three of the scan enable the analysis of both the maternity service environments.

2. *Description of systems and their elements (individuals and activities) are contextually derived because of the mediating influence of their history, experience and the role of the describer and perception of participants.*

The scanning process required the informants to describe themselves and their place within the system (phase one). The process also exposes informants to the perception of others within the system and facts about the external environment they may have previously been unaware of, heightening their alertness to factors that may influence their perception. The process should create an understanding and acceptance that others will view their environment differently because of alternative experiences and knowledge.

3. *There is no correct or incorrect systems model as they are never static or able to be described as a whole/finite entity and the context will be different.*

This scanning method has the potential to be completed within about eight hours. The data-gathering phase takes about eight hours with the transcribing into the grids, analysis and check back with the informants undertaken. This timeframe is estimated on about five to eight informants per group. There is the potential to complete a number of scans simultaneously, then compare and contrast the findings. This process could take place within one organisation or between a number of organisations simultaneously.

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[4] Ethical approval for use of this method was obtained at the point of transition from teaching tool to data-gathering tool. None of the data gathered during the teaching process was included within the scan of rural facilities, which was subsequently carried out and described in Part Four of this portfolio.

4. *Constant change is an adaptive mechanism, vital for survival. The direction is influenced by the system's history and ability to apply/translate this knowledge to the current situation.*

The value of the scanning method in relation to this principle lies in the potential to compare one organisation or part of an organisation with another, each within its unique context. The level and perceived success of the adaptation should become evident. The enhancers and/or barriers to successful adaptation to change or challenge to survival can be identified using this process (phase four).

5. *Communication fuels and shapes adaptation/evolution.*

Analysis of mechanisms of communication, from within and to the outside, should be identified using the scanning process. The degree of isolation of parts from the whole should be uncovered, particularly in relation to examination of management structures, professional development and the levels of co-operation within and between organisations (phases two and three).

6. *Organisations/systems exhibit patterns over time and within their structure. These patterns can develop into attractors, which reinforce specific behaviour.*

The systematic and incremental process of building the picture of the organisation, exposes such patterns. These included an upsurge in birthing women in base obstetric hospitals, maintenance of specific staffing patterns regardless of a fundamental change in the role of midwives, the length of postnatal stay for women and the role of their LMC midwife during this stay. These become really obvious when the taken for grantedness of these patterns are exposed by comparing one organisation or its part with another (completion of phases one to three).

7. *Multiple ways of knowing/viewing (perspectives) are normal and vital for survival. Heterogeneity enables contrasting interpretations of situations to be obtained and inventive solutions or responses applied.*

Ultimately, this scanning method had almost unintentionally developed into a consciousness-raising process. The alertness to patterns that seemed to have no validation and the vision of their organisation/practice through new eyes, seemed to mobilise informants into wanting to take action, no matter how small. The value of this process was also found in the contact informants made with others, in similar situations, but doing things differently, with apparent success.

Development of a data-gathering tool based on the contextual scanning process
Because of the obvious applicability of this method for investigation into the organisation of maternity services by midwives (a key interest of my professional doctorate), a questionnaire was also developed based on the four scanning phases, that could be used with individuals as well as groups.

The questionnaire was reviewed informally by a number of midwives who had undergone the scanning previously, to determine that the process would be possible. The questionnaire was then included within the University of Technology Sydney's Ethics Committee proposal for approval as part of the data-gathering process for my Professional Doctorate. Approval was obtained for this method of data-gathering. A sample of the questionnaire is found in Appendix 1 to this paper.

CONCLUSION

The evolution of the scanning process occurred over a 12 month period. The concepts of complexity theory provided the impetus to keep exploring the potential of scanning as a mechanism for investigating the multilayered and ever-changing nature of the New Zealand maternity system. The idea of developing a more formalised and individualised process, through use of a questionnaire, added another dimension to the scanning process. It enabled midwives over a greater geographical area to be involved in a scanning process without needing to leave their community. They could work through the processes with local colleagues at their own pace, rather then rely on a facilitator to work the informant groups through the processes stage by stage.

Following refinement of the scanning method, the process was applied to a study of rural maternity facilities and associated midwifery services, using the questionnaire as a base for the data-gathering. The process and findings are described in Part Four of this portfolio.

REFERENCES

Arndt, M., Bigelow, B. (2000). The potential of chaos theory and complexity theory for health services management. *Health Care Management Review.* (20) 1 p35-41

Beal, R. (2000). Competing effectively: environmental scanning, competitive strategy and organisational performance in small manufacturing firms. *Journal of Small Business Management.* (38) 1 p27-47 Milwaukee, USA

Berreby, D. (1998). Complexity theory: fact-free science or business tool? *Strategy.Management.Competition.*(1) **http://www.Strategybusiness.co/strategy/98104.**

Boehm, A., Litwin, H. (1999). Measuring rational and organisational-political planning activities of community organisation workers. *Journal of Community* Practice 6(4) p17-35

Byrne, D. (1998). *Complexity theory and the social sciences: an introduction* . London.: Routledge

Campbell-Hunt, C. (1998) Complexity a theory of everything for strategy and trategising? *New Zealand Strategic Management* Spring p34-38.

Campbell-Hunt, C. (1999). Complexity the implications for strategy and strategists. *New Zealand Strategic Management.* Winter p13-23.

Cilliers, P. (1998). *Complexity and postmodernism: understanding complex systems.* London.: Routledge.

Correia, Z., & Wilson, T. (2001). *Scanning the business environment for information: a grounded theory approach.* http://InformationR.net/ir/2-4/paper.html

Cufaude, J. (2000). Cultivating new leadership. *Association Management* Washington, Jan.

Dimitrov, V. (1999). *Decision emergence out of complexity and chaos. semiotics and complexity.* http://members.tripod/vlad_3_6_7/DecisionMaking-in-Complexity.htm.

Dimitrov, V., Hodge, B., Khun, L., & Woog, R.(1999). *Chaos and complexity and creativity and contemplation* http://www.hawkesbury.uws. edu.au/faculties/socialinq/complexity/chaos.htm

Fox, T., Brummit, P., Ferguson-Wolf, M., & Abernethy, M. (2000). Position of the Dietetic Association: Nutrition, aging and the continuum of care. *American Dietetic Association Journal Chicago,* May.

Emery, J., Praveen, T., Hindin, E., Riskind, P. (2001). Partnerships between academic

medical centres and rural communities. *Health Forum Journal* (44) p29-33 US.

Freidel, J (1992) 2020: perfect vision for the next century. *An Environmental Scan Update.* (1) p1-9) Eastern Iowa Community College's Strategic planning process 1992-93

Hatch, T., & Pearson, T. (1998). Using environmental scans in educational needs Assessment. *Journal of Continuing Education in the Health Professions* Summer, 18(3) p179-84

Health Funding Authority. (2000). *Maternity services: a reference document.* Wellington, New Zealand

Health Funding Authority (1998). *Notice issued pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand

Lobel, S., Googins, B., & Bankert, E. (1999). The future of work and family: critical trends for policy, practice and research. *Human Resource Management.* Fall 38(3) p243-54

Mayrhofer, W (2001) Organisational international career logistics: a conceptual tool for analysing organisational expatriation patterns and their consequences for the management of organisations. *Thunderbird International Business Review* New York, Jan/Feb

Mills, N., Haun, L., & Daldrup, D. (2000). Kansas City colleagues in caring: giving new meaning to networking. *Journal of Nursing Education.* Thorofare Feb.

Ministry of Health. (2002). *Maternity Services: notice pursuant to section 88 of the Public Health and Disability Act 2000.* Wellington, New Zealand

Ministry of Health. (2001). *Report on Maternity 1999* Wellington, New Zealand.

New Zealand Government (1990) *Nurses Amendment Act*, Wellington, New Zealand.

Peterson, A. (2000). E-scans analyse service trends and opportunities. *Credit Union Magazine* Madison, US: June.

Van Uden,J., Richardson, K., & Cilliers, P. (2001.) Postmodernism revisited: Complexity science and the study of organisations. *Journal of Critical Postmodern Organisation Science.* Las Cruces

Waldrop, M. (1992). *Complexity:the emerging science at the edge of order and chaos.* UK: Simon & Schuster.

White, M., Marin, D., Brazeal, D., & Friedman, W. (1997). The evolution of organisations: suggestions from complexity theory about the interplay between natural selection and adaptation. *Human Relations*, (50) n11 p1383-1410.

Part Four:
THE DEVELOPMENT OF RURAL MIDWIFERY SERVICES IN THE SOUTH ISLAND OF NEW ZEALAND: MIDWIFERY IN TRANSITION

CONTEXT

By mid 2000, I had become professionally interested in both the management and maintenance of maternity services in rural settings in New Zealand. At the time I was lecturing part-time in a post-graduate midwifery programme and had developed the contextual scanning tool with students involved in one of the courses. This experience, coupled with my involvement in the management of maternity service contracts in the Ministry of Health throughout the South Island, made me aware of the differences in service delivery configurations within the various rural settings in the Island. Even though some towns were only about 90 minutes from each other, the options and level of service offered seemed to differ quite markedly, despite working to the same Ministry of Health service specifications and being resourced from identical funding streams.

Another aspect evident in service change at the time was the gradual withdrawal from maternity service provision in rural areas by local general practitioners (GPs). They did not seem to be leaving this area of practice quietly. Anecdotal evidence from discussions with various rural midwives indicated that the GPs held a view, and articulated it to local women, that if they were not providing the service, it was not safe to birth in the local maternity facility. GPs seemed to have withdrawn their services earlier in the cities where obstetricians or entrepreneurial midwives had readily stepped into the gap to meet the needs of local women.

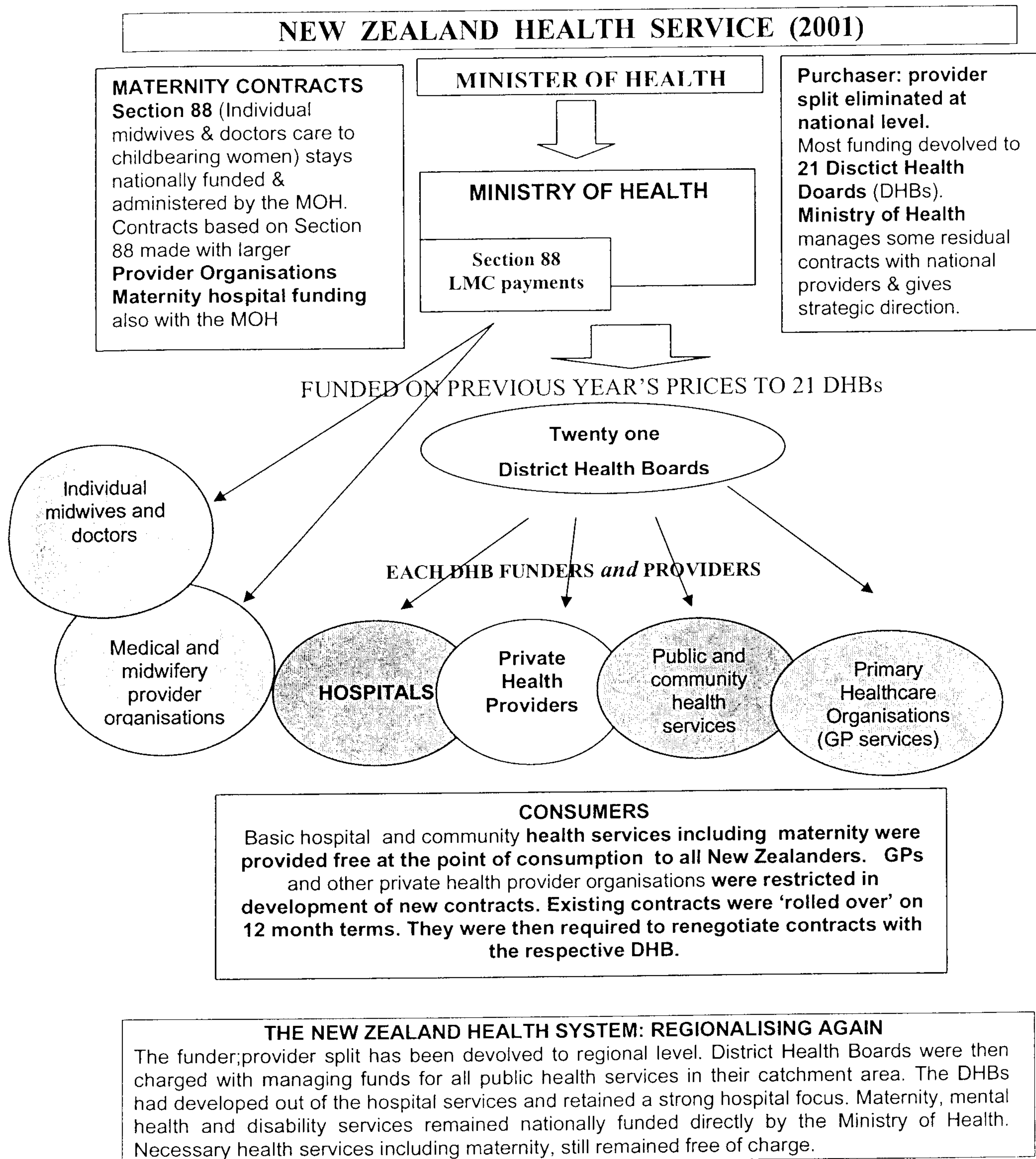
The GP withdrawal in rural areas seemed to have occurred at varying rates and possibly differently. I thought, therefore, it would be useful to scan a variety of rural towns, which still had a current functioning maternity facility, to see if there were any patterns in maternity service development or retrenchment of particular workers. I was interested particularly in the response local midwives had made to the changing environment. How had they evolved their practice/service provision and had they developed maternity services maximising their own potential as legally autonomous practitioners?

This was an exciting time for me. I was involved in both planning and assessment of some smaller maternity services in my role in the Ministry of Health. In my lecturing role and through my doctoral studies, I was exploring philosophical and theoretical underpinnings of health and maternity services as a whole. The Ministry of Health and Health Funding Authority had published a number of new documents on health service strategy over that time. These included 'Maternity services: a reference document' in November 2000 (HFA, 2000), followed by the 'New Zealand Health Strategy' in December 2000 (MOH, 2000) and the 'Primary Health Strategy' in early 2001 (MOH 2001). These documents provided a framework for health service development, including maternity services. From then on, all service initiatives needed to be tagged or explicitly related to the priorities outlined in these documents.

This was a difficult concept to get through to many service providers who seemed to adopt a very paternalistic approach to service development. It was my experience, that most doctors and health managers seemed to believe that their communities were totally unique and that they had a monopoly of knowledge on what sort of service would suit their community. In my role as a midwifery lecturer, I had developed sessions which involved presenting the 'big picture' of health systems to midwives, assisting them to work out how they did or could 'fit' within the system to meet the needs of local women, at the same time being able to have some influence on the evolving nature of the system. I stressed the need to obtain other viewpoints on midwifery service development priorities.

In mid 2001 all maternity contracts, other than Section 88 (2000) which paid Lead Maternity Carers (LMCs), were devolved to 21 District Health Boards as the Ministry moved away from direct contracting for services (refer to figure 4.1). At this point, I ceased providing services for the Ministry of Health in the area of maternity contracting. This gave me the opportunity to become active in future planning for NZCOM.

Figure 4.1 The New Zealand Health Service and the location of maternity contracts in 2001[1].



THE NEW ZEALAND HEALTH SYSTEM: REGIONALISING AGAIN

The funder;provider split has been devolved to regional level. District Health Boards were then charged with managing funds for all public health services in their catchment area. The DHBs had developed out of the hospital services and retained a strong hospital focus. Maternity, mental health and disability services remained nationally funded directly by the Ministry of Health. Necessary health services including maternity, still remained free of charge.

[1] Terminology used to describe the technical aspects of the New Zealand health service, particularly relating to contracting and legislation, is further clarified in the "Glossary and abbreviations" section at the beginning of the portfolio.

Later in 2001, following my data-gathering for this planning, I was commissioned to develop a strategic plan for the College, advise on a redevelopment of their secretariat and prepare a proposal for funding from the Ministry of Health for the College's role in quality assurance activities, given our lack of equity with medicine in this area. The funding proposal was accepted by government which provided the College with a three year window of opportunity for consolidation of activities to support the country's 2000 actively practising midwives scattered throughout New Zealand.

This component of the portfolio, focuses on the examination and analysis of a selection of rural maternity services and the part played by midwives in their development and maintenance. The main aim of this particular project was to explore the extent to which midwives had autonomy over the configuration and delivery of maternity care to women within these primary healthcare settings and identify areas of risk in maintenance of the services they had developed.

INTRODUCTION

Legislative changes in 1990, gave midwives in New Zealand the opportunity to explore more innovative and women-centred models of care. This emancipation was achieved by gaining equity with medical practitioners to access of resources for maternity service provision. The Nurses Amendment Act (1990) meant that New Zealand midwives no longer required medical supervision at births. This gave individual midwives the same access as doctors to:

- the Maternity Benefit Schedule (government funding for care of women in pregnancy and childbirth),
- maternity hospitals, as self-employed practitioners,
- diagnostic services (laboratory and radiology),
- direct referral and consultation with medical specialists,
- direct referral to related support services and agencies,
- prescribing rights for childbearing women in their care.

Midwives were given the opportunity to become self-employed through their ability to access funding, the same as self-employed general practitioners. Hospital-based maternity services were also presented with the opportunity to capitalise on the potential for their employed midwives to develop services independently of medical practitioners. This gave the hospitals an extra source of revenue through having their midwives claim the Maternity Benefit Schedule (a separate funding stream from the maternity facility funding they had access to already). Most significantly in New Zealand

over the last twelve years, was the adaptation of hospital maternity services to continuity of midwifery care. The concept of a woman entering the hospital in labour, with her own chosen midwife, who, more often than not, was self-employed was foreign to maternity hospitals in New Zealand prior to 1990 (Guilliland, 1998).

BACKGROUND TO THE STUDY

Continuity of midwifery care is generally described as integrated care given to a woman throughout her childbearing experience mostly by the same midwife (Pairman, 1998; Tully, 1999). In 1998, the Ministry of Health, through an amendment to Section 51 of the Health and Disability Services Act 1993 (HFA, 1998), introduced the concept of a Lead Maternity Carer (LMC). This document described the LMC as an 'authorised practitioner' (a registered midwife or registered medical practitioner), 'appointed by the woman' to 'take responsibility for the care provided to the woman throughout her pregnancy and postpartum period, including management of the labour and birth' (1998p9)

Although legislated changes enabled midwives autonomy over the provision of maternity care, woman centred models of care seemed to have failed, thus far, to encourage women to birth at home. The majority of women in New Zealand still birthed in a hospital (MOH, 2000).

TABLE 4.1. PLACE OF BIRTH IN NEW ZEALAND 1999 (MOH, 2001)

Place of birth (1)	Number of facilities	1999	1999 (%)
Births in tertiary obstetric units	6	23093	41.08
Births in secondary maternity hospital	21	22617	40.23
Births in primary and rural facilities	55	6422	11.43
Births at home (2)		4079	7.23
Total births		56211	100

(1)For definitions of the various levels of maternity facilities, refer to the glossary at the front of the portfolio.
(2) Estimated by taking the total hospital births away from the total births registered for the year.

Because of the sparse population in rural areas and the correspondingly low birth numbers (MOH, 2001), most of their hospital-based maternity services functioned out of small community general hospitals. Within these settings, midwives were generally required to simultaneously manage both continuity of care for local women and maintain the functioning of the local birthing facility (maternity part of the hospital). This

seemed to provide specific ongoing challenges for rural midwives, who were few in number and relatively isolated from colleagues in the cities (author's experience as a maternity policy analyst, 2001). Most urban midwives seemed to be able to get on with their continuity of care provision without worrying about how the hospital was managed (anecdotal evidence from discussion with the midwifery advisor for the NZCOM, 2000 & 2001). The evolution of these developments in New Zealand and the influence of the environmental context of the services midwives provided in rural localities had not been fully explored.

Most published studies on New Zealand midwifery have concentrated on midwives' activities in self-employed practice settings (Pairman, 1989; Guilliland, 1998; Abel, 1997), focusing on the midwife-woman relationship. New Zealand midwifery managers have been most reliant on literature from the United Kingdom to guide the development of their hospital-based midwifery services. Authors such as Flint (1993), Page (1993) and Campbell and Garcia (1997) were influential in guiding and informing the organisation of hospital-based midwifery service development, but the context of practice in New Zealand was, and remains, different to the United Kingdom in a number of ways.

THE NEW ZEALAND HEALTH SECTOR CONTEXT

In order to make more sense of the peculiarities of maternity services developments in the communities featured within the contextual scanning process, it is useful to reflect first on some of the socio-political and economic developments that had occurred at a national level over the previous ten years. These developments had a profound effect on the nature of relationships between doctors and midwives. The impact was felt strongly at the local community level where midwives were identified as destroying the opportunity for doctors to provide a complete service to patients and their families (Malloy, 1997).

While sharing similarities with other health systems, key features of the New Zealand healthcare delivery in 1990 differed from both the United Kingdom (UK) and the Australian models (Blank, 1994). New Zealand had a National Health Service model of access to health care funded out of taxes, similar to the UK model. However, universal access had been progressively restricted in this country. Doctors had always retained the right to charge co-payments and essentially remained self-employed with the state augmenting their income through a fee-for-service based subsidy. Doctors did not have a registered population, but relied on word of mouth and practice visibility to build up

their business. This fostered and maintained a competitive environment among practitioners who were reliant on a fee-for-service based income, rather than funding on a population base as in the UK (Blank, 1994; Cheyenne, O'Brien & Belgrade, 1997; Tully, 1999).

There was limited provision of direct public funding to any other self-employed health professional in New Zealand prior to 1990, either in primary or hospital-based services. Nurses within general practices were subsidised by the state, but the doctors received the subsidy, not the nurse. Some midwives had access to limited public funding for 'domiciliary' (in the home) midwifery, but an income from this source equated to much less than an employed midwife, and they required supervision of a doctor for births at home (Donley, 1998). Few doctors agreed to provide this supervision, reducing midwives access to potential clients and the corresponding income source from the state. Most health professionals other than doctors were employed by the state in 1990, including midwives (Guilliland, 1998).

Tully (1999) felt that the inability of Australian midwives to access the same funding as doctors has a similar effect on the development of midwifery there, as in most other developed countries. Within a capitalist model, being required to pay out of pocket for the midwife would act as a disincentive for consumers to opt for midwifery care by an independent, self-employed midwife, in the presence of heavily subsidised (by insurance) or free, medical care. Even if the woman opted for continuity of midwifery care, medical back-up could be difficult to secure (D Davis midwifery lecturer, personal conversation, 2000). A publicly funded (free) continuity of care midwifery service would be viewed as placing at risk the income of medical practitioners.

NEW ZEALAND MIDWIVES MOVE INTO SELF-EMPLOYMENT.

The payments which self-employed midwives were able to access in New Zealand immediately following the 1990 Nurses Amendment Act had been based on the activities of doctors during a woman's pregnancy, childbirth and postnatal period. These payments, based on a high hourly rate, appeared to be quite generous to midwives, who provided care for the continuum of the woman's childbearing (many hours).

The payments for the antenatal and postnatal visits reflected the expectation of a short visit made to a GP, but most midwives would spend 45 minutes to one hour, or more if

travel to the home was made. The labour and delivery component (an hourly rate) of the payment was very generous equating to almost 10 times an employed midwife's hourly rate (Tully, 1999). Again this reflected the custom and practice of the doctor who would 'pop in' for the birth. There was a significant hourly rate payable for attendance in labour and birth beyond one and a half-hours. The travel supplement was also generous, reflecting the doctor's practice of working out of rooms, only making the exceptional home visit. Some midwives earned more from the travel supplement, than the visit itself!

For the first three years following the 1990 legislation self-employed midwives were earning significantly higher incomes than general practitioners for care of women in childbirth. Tully (1999) estimated that a midwife giving care to a woman during labour and birth lasting 10 hours in total, would earn five times more than the doctor would for the same birth. Traditionally the doctor would give intermittent care and rely on another practitioner, the hospital midwife, to provide the woman with continuous care. The attractiveness of the high income was seen to encourage midwives to leave the hospital and take up independent practice in the community (Tully, 1999).

By the end of 1993, Pairman (1998) estimated that there was a 300% increase in the exodus of midwives from hospital employment to independent practice. At this point, the cost of maternity service provision had come under scrutiny by the Department of Health. The Maternity Benefit Schedule expenditure had risen from $20 million in 1990 to $78.2 million by 1993. One of the major flaws of the system was claimed to be the fee-for-service model, which enabled multiple practitioners to claim for the care of the same woman (Pairman, 1998).

A Coopers and Lybrand report on maternity services, commissioned by the Regional Health Authorities (NZRHAs, 1993) released in 1993, called for a refocusing of maternity services on to the needs for the woman. This report called for components of care to be developed with prices attached and that a primary practitioner should be identified who would claim modules of funding for episodes of care and subcontract to another provider if necessary (Tully, 1999). This represented an important shift from fee-for-service to fee-for-case.

The Coopers and Lybrand report (NZRHAs, 1993) clearly supported the midwifery model of care (Tully, 1999). While doctors were required to subcontract for midwifery services in the labour, birth and postnatal modules, midwives could provide the whole

service themselves. This contractual relationship that had developed between providers, was exacerbated by the health reforms instituted that same year.

Based on a market model, the reforms set up funding bodies separate from the government. Their role was to negotiate with providers for health service contracts[2]. For the first time, private service providers were on an equal footing with many previously publicly funded health providers, competing for contracts. The Maternity Benefits Schedule was enshrined in Section 51 (HFA, 1996) of the Health and Disability Services Act (1993). Midwives had maintained their equity with doctors within the legislation that prescribed the health reforms. The Section 51 (HFA, 1996) Maternity Payment Schedule remained under one Health Funding Authority rather than being split between the four HFAs. This was a fortunate decision meaning that the College of Midwives only had to negotiate with one rather than four funding authorities, when any changes to the Section 51 were to be made. While most health services were contracted for on a regional basis, primary maternity services provided by individual practitioners remained nationally funded. This enabled consistent national contract specifications and prices to be established, rather then regional variations being brokered.

It was within this environment that many hospitals started to show an interest in developing continuity of midwifery care services (Hendry, 1996; Tully, 1999). While set contracts for facility (hospital/birthing unit) based services were negotiated, it appeared that employed midwives could claim the Maternity Benefit Schedule for the organisation, giving hospital services another funding stream (my experience as a maternity hospital manager at the time). One of the most difficult aspects of establishing these services, was negotiating salary and conditions for employed continuity of care midwives that were favourable in comparison to what midwives could earn in self-employment (Hendry, 1995).

A further inducement for hospitals to start offering continuity of midwifery care, occurred with the introduction of a fixed fee payment system outlined in a remodelled Section 51 Maternity Advice Notice (HFA, 1996) issued in 1996. This Notice (HFA, 1996) outlined the specifications for modules of care for one childbearing woman and the associated payment schedule. The Notice (HFA, 1996) also set out the role and responsibilities of a Lead Maternity Carer (LMC). This function was to be carried out by

[2] Refer to Part One page 47 for a diagram of the New Zealand Health system in 1993/4.

either a doctor or midwife who was registered to be the only recipient of the modular payment for care to a named woman for the complete episode of maternity care. The LMC could change if the woman and/or practitioner chose to relinquish the care relationship and another practitioner take over the role. This represented a contractual relationship between the woman and the LMC.

The subsequent reduction in payment for each woman that a doctor would receive because of the need to subcontract for midwifery services, saw an exodus of general practitioners, particularly within the cities, from maternity practice. The void was filled by midwives, both employed and self-employed (Pairman, 1998; Tully, 1999). Not to be outdone, some doctor provider organisations negotiated access to hospital midwifery services for a fixed low price in return for high volumes of maternity cases. Further changes to Section 51 in 1998 (HFA, 1998) set a price for midwifery services provided by individual midwives for a doctor LMC.

Hospital-based Midwifery Services

I was closely involved with the National Womens' Health Network meetings from 1994-1997. This informal organisation was established following the 1993/4 health reforms, to enable networking between womens' health managers from throughout the country. We met about four times a year, to update each other on service development activities and address key challenges to further development within the competitive health service environment that had been actively set up following 'the reforms'.

One regular topic for discussion in the mid 1990s, was the challenge in establishing hospital-based continuity of midwifery care. The main issues centred on attracting midwives back into employment and encouraging employed midwives to move from the regularity of shift work into the unpredictability of managing a continuity caseload. The nature of the caseload, the expectations of availability and back-up arrangements were the main source of contention in employment contract negotiations. The final agreed salary for continuity of care midwives reflected the degree of risk (of overwork and lack of support) the midwife was expected or willing to accept.

Generally midwives who moved into continuity schemes earned more that their colleagues who remained on shift work. Many were given a car to use, or a mileage allowance if using their own car. Most had equipment provided and were given a clothing allowance because they were not expected to wear a uniform. The continuity

teams were managed in a variety of ways and subsequently had varying degrees of autonomy (Hendry, 1996; Tully, 1999).

Tully (1999) and Hendry (1995 & 1996) described arrangements of hospital-based midwifery services that started developing in the mid 1990s. Employed continuity of care midwives were generally contracted to manage a specific number of women per year. This was referred to as a caseload. The benchmark volume of 'cases' booked per month was about five to seven pregnant women. If the midwife was employed part-time, she carried a proportionally lighter caseload. While some midwives worked together in teams, others paired up in order to relieve time out and provide back-up if a birth or emergency occurred when the midwife was already occupied with another birth. Continuity midwives provided care and were available, in most cases, to the same woman from pregnancy through to about four to six weeks postnatally. Most hospital-based practices had evolved into their own unique ways for managing their caseload over time.

To compliment the role of the continuity midwife, the hospital was also staffed by midwives who worked on shifts. They were subsequently referred to as 'core midwives' (Tully, 1999p191). The role of these midwives was to provide the midwifery cover in the hospital that was required according to both contractual (Maternity Facility Service Specifications, HFA, 1999) and legal obligations (Obstetric Regulations, NZ Govt.1986).

While the continuity midwife had a clear legal role (Section 51 Health and Disability Services Act) to remain with the woman during labour in the facility until two hours following the birth, the core midwife's prime role was to continue to provide midwifery care while the woman was in the facility following the birth. Most facility providers interpreted their reading of the Maternity Facility Service Specifications (1999) as requiring a midwife on duty when a pregnant or postpartum woman was in the maternity facility and to provide support and back-up for the LMC in an emergency (discussion with providers, 2001).

This requirement to cover the core services with a salaried midwife placed the financial viability of small units, with low volumes of postnatal women, at risk. The need to employ a core midwife for three to four days while a woman adjusts postnatally, even though she has her continuity midwife visit daily was costly and usually outweighed the price received from the government for the postnatal in-hospital stay. The price paid in

2001 for a postnatal stay in a small unit was $2021 per woman (MOH, 2000). At an hourly rate of $20 for an employed midwife working shifts, a four-day stay would cost about $1920 in midwifery wages alone. The cost of overheads, such as meals, cleaning and consumables also needed to be recovered from the price of the stay.

Some small facilities believed they could survive by providing midwifery LMC services for women (discussions with providers, 2001). This had the potential of introducing another income stream into the facility, i.e. the modular payments for the midwifery LMC caseload. Conversely, general practitioners having left maternity seemed more likely to refer women to the base hospital rather than 'risk' birth in a primary maternity facility with no doctor present. Small facilities needed their own midwives, willing to provide 24 hour continuity of care services, to attract women to birth locally (Hendry, 1996: Tully, 1999).

Hospital-employed midwifery LMC services appeared to have been slower to develop in some rural areas, where the local general practitioners had maintained their role in maternity. The employed midwives had remained on shift work providing the doctor LMCs with the midwifery component of the labour and birth care. As the doctors withdrew from these services, the volume of self-employed midwives working within some rural areas had been insufficient to support the maintenance of the facilities (P Dadson, MMPO National Manager, personal communication, 2001). This prompted rural managers to set their employed midwives up as LMCs, in direct competition with their self-employed colleagues.

A further conflict experienced by employed LMCs, was the loss of income to the facility when one of their clients chose to birth at home. The facility did not receive any payment for a home birth. The service fee paid by the Ministry of Health to the maternity facility owner, for a labour and birth and postnatal stay was $3368 per woman (MOH, 2001). A midwife received an increment of $100 for a home birth.

There seems to be a variety of factors which impact on the type of service offered to childbearing women in New Zealand and a variety of drivers influencing the behaviour of practitioners that set the context for this investigation of rural midwives. This next section outlines the findings a contextual scanning process aimed at when exploring the organisation of maternity care by midwives in rural settings in the South Island of New Zealand as a microcosm of primary maternity services nationally.

THE AIMS OF THE STUDY

The goal of this study was to explore the organisation of maternity services by midwives based in and around rural facilities in the South Island of New Zealand using the contextual scan methodology. The key objectives of the study were to:

- describe key features of rural midwifery services in the South Island of New Zealand,
- enable rural midwives involved in the study to identify and analyse the service they provide and why they work the way they do,
- challenge midwives to critically evaluate the effectiveness and visibility of their service in the community in which their practice is located,
- identify risks and adaptations that could be made to ensure the continued provision of continuity of midwifery care and ultimately the survival of their service.

In terms of my complexity approach, the activities of one part of the system represents a 'fractal' of the system as a whole. The fractal will share some features and symptoms of the whole. Investigation of the rural maternity system and the state of midwifery in these settings should provide an indication of the 'health' of the maternity system as a whole in this country.

METHODOLOGY

The contextual scan process (described in Part Three of this portfolio), using the questionnaire survey tool in Appendix 1, was used as a framework for data-gathering and analysis. While the process involved data-gathering and analysis from a selection of services individually, the results were aggregated and analysed to identify patterns of activities and issues affecting them as well as an agreed plan for action. The commonalties among the strategies identified to maximise survival were also explored. A convenience sample of nine rural maternity services, each located around primary maternity facilities in rural towns in the South Island of New Zealand, were included in this study.

THEORETICAL FRAMEWORK

Complexity theory provided the theoretical framework for the study (refer to Part Two of the portfolio). This theory contends that organisations, like a maternity service, should be viewed as living systems (Waldrop, 1992) which exist in a dynamic environment that constantly tests their ability to survive. Flexibility, adaptability and resilience, are key determinants for survival (Byrne, 1998) within constantly changing, interactive

environments such as those found within health care services. The interpretation and nature of patterns play a large part in complexity theory (Campbell-Hunt, 1998). Focusing on the organisation's contextual environment can assist with predictions of future functioning (McKissock & McKissock, 1998).

In line with these concepts, the researcher developed a 'Contextual Scan' method (refer to Part Three of this portfolio), loosely based on environmental scanning, to provide a composite topographical scan of a sample of primary rural maternity services in the South Island of New Zealand. Contextual scanning was developed to assess internal and external surroundings and forces at work within the context of the various practice settings. This enables alignment of strategies for service development with environmental needs by clarifying the current and potential trends, threats and opportunities.

DATA COLLECTION

The scanning process, consisting of a number of tools including questionnaires and on interview, followed up by email communication to reach consensus on findings, was applied to nine rural maternity services within the South Island of New Zealand.

The contextual scan methodology, described more fully in the previous section of this portfolio, was used to guide data-gathering at four levels:

1. Multidimensional descriptions of midwifery services provided for women in nine rural community settings in the South Island of New Zealand.
2. A description of the environmental context of these services.
3. Identification of factors inherent within the service itself that appeared to inhibit or enable the development and maintenance of continuity of midwifery care for childbearing women.
4. Development of a possible strategy for strengthening and future-proofing the service.

QUESTIONNAIRE DEVELOPMENT AND APPROVAL

A questionnaire was developed, based on the framework of the contextual scan format (refer to Part Three of this portfolio). Two versions of the questionnaire were used, one for the LMC midwives and the other for midwives working within facilities. There was very little difference between the two. The midwife's questionnaire asked about caseload while the facility questionnaire asked in the same section about volumes of 'inpatients'. Having two versions of the questionnaire from the same locality also added a further dimension to the overall picture of services in the area.

The questionnaires were subsequently submitted to the University of Technology Ethics Committee with a proposal to carry out scans of specific rural maternity services. Following approval (refer to Appendix One), the questionnaires were sent to one rural maternity service with agreement of the midwives, as a pilot study to check the appropriateness and focus of the questions and process of data collection.

PILOT SCAN PROCESS

Following completion of the scan questionnaires, the researcher visited the midwives in their locality, to discuss the scan process and review the results of the questionnaire. The midwives found the process a useful tool for reflecting on their practice. Following further discussion on the actual process, they considered the questionnaire a sufficient basis on which to build the information required to inform the study. In addition, the midwives felt that the researcher should follow up the questionnaire with a visit to personally review the scan, ask the informants any further questions and physically experience the environment in which the midwives practised.

After the visit with the 'pilot midwives', the researcher placed the questionnaire answers onto the template (Part Three:p94-95) and emailed this back to enable those midwives to check and alter or add to the presentation of results. This was necessary to ensure the data was accurate from their perspective and that consensus was achieved over the key issues that had been identified out of the scan. These steps were subsequently added to the scan process overall. There were also minor modifications to the questionnaires in order to capture data left out by the initial questionnaire and added by the midwives during the pilot visit. These questionnaires were submitted for reference to the UTS Human Research Ethics Committee and can be located in Appendices three and four of this portfolio.

Data-gathering Phase:

In addition to the service involved in the pilot study, nine further maternity services were identified by the researcher for potential scanning. This would have brought the total involved in scanning to ten. At the time of the study, there were sixteen services centred around rural maternity facilities that would have met the criteria for participation because:

- they were located in rural towns at least 60 minutes from a secondary or base hospital,
- they consisted of some form of maternity hospital facility and were classified as primary (no interventions) maternity services,

- all either provided or supported midwifery LMC services.

After the pilot study, nine of the services were selected for scanning because they were all located within road travelling distance of three days (for the convenience of the researcher visiting them).

The managers, or midwife in charge of the ten facilities were sent a copy of the questionnaire and a letter introducing the researcher, the rationale for the study, the scan process and an invitation to participate. A week after the letters were sent, the managers were contacted by the researcher and asked if their service would like to take part in the process. All those contacted agreed to take part and welcomed a visit from the researcher to discuss the scan questionnaire results. Subsequently one of the ten services could not complete the questionnaire within the required timeframe and were omitted from the study.

The researcher sent further questionnaires, at the request of the managers, to other midwives involved in the services selected in preparation for a visit by the researcher. The researcher visited each of the providers and spent between three and four hours with each. In all cases at least one midwife took part in the meeting. Two providers arranged for both employed and self-employed midwives to be present. In six cases, only one midwife was present. In all but one case the midwife taking part in the questionnaire review was the midwifery co-ordinator. During the visit, the researcher either worked through the questionnaire with the midwives, or reviewed the questionnaire, which had been completed prior to the visit. The researcher was also provided with a tour of the facility and the local town.

Following the visits, the researcher placed the questionnaire information onto the scan template (refer to Part Three Table 3.1 p 95-96) then faxed or emailed each draft to the informant(s) for checking or completing. A great deal of communication by telephone and email between the researcher and midwives followed the visit to clarify information and complete gaps in the data.

The interest stimulated by the process seemed to become infectious, and the service which had to be eliminated from the study because they did not respond to the request to provide the initial scan information, wanted to become involved. Because they were not included in the initial facility visit by the researcher, they could not be reintroduced

into the study. However, they were supported by the researcher to use the process for their own service development.

On receipt of the completed and checked scans from the nine services included in the study, two key objectives were met:

1. Each provider was presented with their own scan and a unique set of strategies for the further development of their services. The scan could be used by them as a benchmark against which initiatives instigated to develop the service could be measured in 12 months.
2. They also received a composite scan of all the services, which was created by adding the data from each onto one consolidated template allowing both totals and averages for volumes to be collated and the frequency of the features in the various components of the scans to be counted and compared. For the purposes of this study, the results of the composite scan only, is discussed in the scan findings.

THE CONTEXTUAL SCAN FINDINGS

PHASE ONE OF THE SCAN PROCESS: THE SCOPE, ROLE AND FUNCTION OF THE MATERNITY SERVICE.

The South Island of New Zealand, with a land mass greater than England, has a population of just over 870,000 with 10645 babies (refer to Table 2 below) born in 1999. Scattered throughout the Island are twenty-one operational primary (uncomplicated births) maternity facilities. Sixteen are located in rural settings which are at least sixty minutes from a secondary or tertiary maternity hospital. Between them, in 1999, these isolated rural facilities provided a venue for 468 births (MOH, 2001), representing about 50% of all the primary facility births in the South Island. The total number of births in the rural facilities in this study accounted for 67.3% of these rural births.

TABLE 4.2. PLACE OF BIRTH IN THE SOUTH ISLAND OF NEW ZEALAND 1999.

[1]Place of birth in the South Island (SI)	Number of facilities	1999	1999 (% of all South Island Births)
Births in tertiary obstetric units	2	5462	51.31
Births in secondary maternity hospital	7	4246	39.89
Births in primary and rural facilities[2]	21	937	8.8
Total births	30	10645	100
Births in rural primary facilities	16	468	50% of SI primary births
Births in the study group facilities	9	315	67.3% of SI rural facility births

Service locations

All of the birthing services included in the study were located within provincial towns with catchment populations of between 5000 and 20000 people. Facilities were all located 1 to 1.5 hours road travelling time from a secondary or tertiary maternity facility. The transfer process to a base obstetric unit in the city generally increased the distance by at least 30 minutes, because most of the hospitals did not have an ambulance on site. Some did not even have one in the town. Most of these maternity services were spaced at least 60 minutes from another rural maternity facility.

For the purposes of analysing the organisation of maternity services provided by midwives, it seemed most useful to access local midwives through the local maternity facilities. While most of the key informants were employed and hospital-based midwives, some facilities invited self-employed midwives to become involved in the data collection.

All the midwives indicated that if the local facility were to be closed, the focus of midwifery-led maternity care would be lost, because the local facility seemed to provide a focal point for delivery of maternity care. Most self-employed midwives in the areas, worked out of their home and their car, at times running antenatal clinics in the local maternity hospital, for women when they came into town for shopping. One full-time LMC midwife reported that she covered 50,000 kilometres per year.

[1] MOH (2001)

The actual facility birth rate did not represent the true birth rates of the localities because of the volume of women who chose or were advised to birth in the city. Midwives were not sure about the number of births locally, but the scan process triggered them into finding out from the local branch of the well child provider organisation who received referrals for all babies born in the locality. A problem encountered seeking information this way was that the provider organisation had different service boundaries to the maternity service boundaries. The two facilities who matched boundaries with the well child provider and who were ultimately able to get this information, found that they 'lost' more than 60% of local births to the secondary or tertiary maternity facilities in the city. This finding was a shock to the local midwife who had estimated that she had at least 60% of the births locally.

The Maternity Facilities

Seven of the maternity services' facilities had inpatient beds located within a 10-15 bed community hospital. These were generally positioned in what was referred to as the maternity 'wing', consisting of 3-4 postnatal beds and 1-2 birthing rooms. One of the facilities was identified as a stand alone Birthing Unit. This Unit was midwifery owned and managed. The other maternity-only facility was located within an old rural hospital that had reduced its beds to provide maternity-only inpatient services.

Two of the facilities were owned and managed by a base obstetric hospital, while six others were owned by a community trust. Three of the trust owned community hospitals were in need of considerable upgrading. All the facilities employed midwives and nurses to staff their maternity service. Employed midwives in five facilities had well established midwifery Lead Maternity Carer (LMC) services, while the other four were reliant on self-employed LMCs, either local midwives or general practitioners, to provide these services.

A. Volume of maternity activities within these facilities:

Table 4.3 below, provides an overview of birthing outcomes for these facilities in 1999[3]. The total births per facility ranged from 10 to 92 per year, with an average annual birth rate of 38 births per facility. The combined total births of the three DHBs within the scan area was estimated at 4695 for the 1999 year (MOH 2001). The total births in all of their rural facilities was estimated at 399, indicating that the average rate of rural

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[2] One of the services in the study was omitted in the MOH '1999 Report on Maternity' Their 33 births for 1999 have been included in this total.

births for these DHBs was 8.5%. The 314 births within the facilities under study represented about 80% of all the rural facility births in these DHBs.

B. Intervention rates

The intervention rates, as expected for facilities that do not have any on site medical services, were very low (refer to Table 4.3) compared with the national average.

TABLE 4.3 VOLUME OF MATERNITY ACTIVITIES AND OUTCOMES FOR THE NINE RURAL SERVICES IN 1999

Facility[3]	Normal Births	Breech	Forceps	Vacuum extraction	Induction	episiotomy	Still births
1	26	1					
2	30	2	1			2	
3	91			1	5	3	
4	21		3		1	6	
5*	55		11		11	13	
6	10						
7	33						
8	13						
9	15			1			
Total	**294**	**4 (1.2%)**	**15 (4.8%)**	**2 (0.6%)**	**17 (5.4%)**	**24 (7.6%)**	**0 (0%)**
All 55 primary facilities	5882[4]	22 (0.3%)	97 (1.6%)	160 (2.6%)	592 (9.6%)	316 (5.1%)	3 (0.04 %)
NZ total rates for all facilities	36582	468 (.9%)	2801 (5.3%)	2559 (4.8%)	13480 (27.7%)	5136 (12.4%)	440 (8.2%)

*In this facility, a local general practitioner offered women inductions and epidurals, hence the increase in operative births, which he had also 'specialised' in.

C. Antenatal admissions.

None of the facilities normally admitted women antenatally unless they were being induced. Some women came in at the request of their LMC for cardiotocograph monitoring, otherwise, women requiring antenatal admission were sent on to the obstetric unit in the city. Networking between midwives in some areas had seemed to establish an acceptable level of antenatal monitoring that they should do locally and that which should be done in the city. Loss of women to the city for antenatal monitoring was generally followed by a recommendation from the obstetrician or registrar that they birth in the base hospital, thus translating as a loss of revenue for the

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[3] This does not include the 261 primary births wrongly coded as caesarean sections (MOH,2001p32)

local midwife and for the local facility in facility fees. There seemed to be a consensus that the base hospital were unreasonably conservative with their management of women from distant locations.

D. Intrapartal transfer rates

The number of women intending to birth locally who transferred in labour to the base obstetric unit was not easy to determine in some facilities, because there was no systematic way of capturing this data, other than in the 'birth book'. This book normally recorded a maternity admission per page. However, if there had been urgency in admission then immediate transfer, the information may not have been recorded for some women who would have taken their maternity notes with them to the obstetric hospital. Based on the data supplied from some facilities, the rate was about 20-25%, but because of the low birthing numbers, one transfer could dramatically influence the overall rate. The rate of 20% was similar to that experienced by the researcher when managing a primary birthing service in the South Island (Hendry, 1995) and that reported in the New Zealand medical literature (Tilyard, Williams, Seddon, Oakley & Murdock, 1988).

Anecdotally, midwives reported that the rates of intrapartal transfer had decreased as GP LMCs withdrew from service provision. They felt that midwife LMCs were more cautious, as they were not trained to carry out forceps or vacuum extractions, so tended to refer women antenatally to the base hospital if they had any concerns about a woman's potential to birth spontaneously. The reduction in inductions, which were generally performed only by GPs, was also viewed as contributing to less transfers out in their view. Midwife LMC's ability to access diagnostic tests for women, their right to prescribe antibiotics, particularly for urinary tract infections and the acceptability of faxing CTG tracings to the base hospital for discussion with an obstetrician, enabled them to have more confidence in providing care distant from medical support.

E. Postnatal transfers back to the rural facility

An average of 33% (range 14% to 60%) of admissions into these facilities were from women for inpatient postnatal care following a birth in the base obstetric hospital. The separation of the facility fee payment to the hospital into two modules, intrapartal and postnatal, enabled the local rural facilities to gain some income from local women's births, even if they birthed in the city. These postnatal women tended to stay about a day longer than women who birthed in the facility. Many of them had experienced some form of intervention, such as an operative delivery, but the midwife informants were not

able to give a breakdown of actual intervention rates, because this data was only kept for women who did birth locally.

F. Facility maternity staffing and back-up services

There appeared to be 22.5 full-time equivalent employed [5](FTE) midwives between all the facilities in the study (2 FTE were planning to leave in the following 3 months). The FTE level at the time of the study calculated 1 FTE employed midwife per 14 births on average in these facilities. With postnatal women included in the total, each FTE midwife would care for an average of 34 women per year. These employed midwives collectively cared for about 774 inpatient admissions per year, with an average day stay of 3.5 days or 2709 bed days (according to the scan informants).

Karitane nurses[6], Obstetric Nurses[7], Enrolled nurses[8], Registered nurses and hospital aids were available 'on call' in seven of the facilities to support the midwives provide 24 hour cover when a woman was an inpatient in the facility. Two of the facilities relied on the midwife to carry out routine cleaning and provide meals.

At the time of the data-gathering, the midwives in four of the facilities were in the process of transferring from a 'core' facility role to an LMC role. This meant they would become more involved in the co-ordination of the whole maternity service rather than waiting in the facility for the self-employed midwife or the GP LMC to bring women in as they had previously. These midwives were aware that they needed to shift their focus from facility to community maternity service provision.

G. Medical services

Three facilities did not have GP LMC services. Most of the GPs providing LMC services in the other four facilities were reported to have chosen to cease providing maternity care within the 6-12 months following the data-gathering for this scan. This was the key reason that the employed midwives were being encouraged to start offering local women LMC services to maintain viable birthing levels in their facilities.

There were reports from some of the facilities that the GPs had indicated that they would not provide medical support for the midwives once they had stopped providing

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[5] The actual FTE status was too difficult to determine owing to part-time and on-call arrangements.
[6] Nurses trained to care for children up to 5 years of age. The training ceased in the 1970s
[7] Registered as an Obstetric Nurse following 6 month training to assist midwives and women in childbirth. Training ceased in the 1970s
[8] Nurses with 12-18 months training to assist registered nurses. Training ceased in 1980's.

maternity services. When asked about the last time they did call in a GP for an emergency, none could recall an occurrence in recent years. For them, conversely, the most vivid recollections of emergencies had involved the GP who required the assistance of the midwife. Midwife LMCs referred directly to the base hospitals and were all updated in their skills in managing obstetric emergencies. All could cannulate and carry out infant resuscitation. All the informants felt that GPs were no longer confident in operative births. Over the previous 12 months four of the facilities had operative vaginal deliveries. One facility had a GP LMC who administered epidurals (no other primary facilities in the country appeared to offer epidurals (MOH, 2001). Most of these births required a lift-out forceps. Inductions were rarely carried out in all but this one facility.

H. Home Births

Employed midwives from four of the facility-based services also provided midwifery care at home births, while the other five localities were reliant on self-employed midwives for this service. The actual volume of home births in these rural localities were not able to be accessed, because most of the self-employed midwives' services crossed a number of rural facility boundaries, and they were not obliged to report home births to the local maternity facility.

There was no indication that the home birth rate was different from any other part of the country. With a national home birth rate in 1999 of 7.26%, this would represent about 25 home births in these localities based on the volume of low risk births in the facilities under study. All the employed midwife informants expressed a conflict between trying to maintain viability of their facility and offering home birth, because if the woman birthed at home, their facility did not receive the $3368 facility fee. The midwife received a $330 payment for 'Home birth Services' (Section 51, HFA, 1998) instead .

I. Midwifery Lead Maternity Carer (LMC) Services

The findings from the contextual scans provided an overview of LMC services in these rural localities. Overall about 60% of all births within these facilities had midwifery LMCs, three facilities had 100% midwifery LMCs. The midwives estimated that by all but one facility would have 100% LMC midwife births within the next 12 months. Up until July 2001 employed midwives in four facilities did not provide midwifery LMC services but provided midwifery care for general practitioner LMCs and midwifery back-up for self-employed midwifery LMCs.

Five of the rural localities had known home birth services provided by self-employed midwives. These midwives also accessed the rural facilities to birth women. Four facilities were totally reliant on employed midwives to provide all the community midwifery services.

J. Self-employed Midwives

The informants indicated that there were in total 10 self-employed midwives providing services within the catchment area of five of the facilities (four facilities had no self-employed midwives working in the locality) . The self-employed midwives provided most of the home birth as well as most of the facility births, particularly where the facility did not offer midwifery LMC services.

The FTE status of these midwives was not able to be calculated, but many appeared to take a heavy caseload (more than 50 women per year) because they also provided antenatal and postnatal home-based care for women birthing out of the locality. This work was building as GPs were withdrawing. Despite GPs recommending women birth at the base hospital 'just in case', many women preferred to give birth locally so shifted to local midwives for care.

K. Medical LMC Services

Over the 12 months prior to the scan, general practitioner LMCs attended an average of 40% of births in the facilities under study. Midwives reported that most GP LMCs were choosing to exit provision of maternity services in the rural facilities by December 2001. A number of reasons were given by the midwife informants for this move. While of course, this is indirect data and may be subject to interpretation, they surmised the following rationale:

- the time and energy GPs needed to put into reconfiguring their other medical services to meet new health funding arrangements,
- their perceived increase in risk of medical malpractice suits if there was an adverse event,
- a lack of GPs trained in obstetrics to back them up,
- remuneration from Section 51 was not sufficient to cover their costs, particularly in rural settings,
- their inability to find a midwife to work with them to provide the required midwifery services.

Base obstetric services had responded to this lack of medical cover by providing a location for regular obstetric clinics in five of the rural facilities. The obstetricians and

'their midwives' visited up to fortnightly, from these city maternity hospitals. One private obstetric service also offered 'on site' consultations in two of these rural facilities. One obstetrician provided clinics in his holiday house, which he visited regularly, particularly in the ski season. None of these obstetricians would provide on-site intrapartal back-up or support, nor deliver women in any of these rural facilities. Midwives reported that these clinics attracted 'low risk' women to birth away from the local maternity facility. Most of these obstetricians relied on local general practitioners to provide referrals and some of the antenatal care, and local self-employed midwives to provide the postnatal care.

L. Pregnancy and Parenting Programmes

Seven facilities provided childbirth education classes. The Plunket Society (a well child provider organisation) and Parents Centre (a national consumer organisation) also offered programmes. There seemed to be little collaboration between the local midwives and these providers. Few of the midwives contributed to any of these sessions, or were aware of the programme content, yet, in many cases they provided the maternity care for the women who attended them.

M. Referral and Support Services

Five of the facilities were located within two hours of an obstetric referral hospital and the other four are within 60 minutes road travelling time. Six facilities had weather dependent road transfer facilities and needed to rely on air transfer at times in winter. Because of the lack of proximity to an ambulance, some facilities needed to add up to an extra hour to transfer times to the secondary facility. All the facility midwives indicated that they had excellent relationships with obstetricians at the secondary facilities. There were strategies they had developed to enhance this, including attending study days in the city and visiting the base hospital when in town.

Eight facilities had regular ultrasound and laboratory services. The midwives had a good relationship with the district and Plunket nurses. The relationships with practice nurses and general practitioners were less well developed. This was mainly due to the historical preference of these practitioners for referring all pregnant women to the secondary maternity service via the visiting obstetric clinics. This enabled the GP to retain the antenatal and postnatal LMC funding. Facilities with the best relationships with GPs were those where the GPs did not practice obstetrics and referred women to the midwives for their initial assessment and birth options. There were only two of these in the study sample.

PHASE TWO OF THE SCAN PROCESS: THE EXTERNAL ENVIRONMENT.

This phase involved assessment of trend and issues, threats and opportunities that have the potential to influence the development and need for the service within the broader community context.

A. The Communities

Eight of the facilities were located within the lower half of the South Island. The other facility was located in the top part of the Island. All the communities were rural with high tourist populations and associated service industries. All but three had seasonal population fluctuations. All the southern communities were experiencing population growth with the introduction of dairy farming in the region. This had led to an increase in maternity service requirements because this industry brought new, young families into the area.

B. Geographic features

The range covered by the maternity services associated with each of the facilities covered a radius of 1-1.5 hours travel by car. LMC midwives travelled an average of 45,000 kilometres per year for home and facility visiting. In winter, the roads around seven of the facility catchments were affected by ice and snow. Poor visibility in winter often meant that air retrieval was too risky. The roads to the base facility, for all but one service, were straight, sealed and well maintained. Midwives fostered good relationships with emergency support agencies, such as police, search and rescue and ambulance.

In all localities, public transport was very infrequent and costly. Women had to find their own transport if they needed to travel to the facilities. Therefore, the midwives believed they did more home visiting than urban midwives, unless the woman were regularly coming to town for shopping.

C. Sociocultural profile

Midwife informants consistently described their populations as being of two distinct socioeconomic groups. Firstly there were the service workers and social welfare beneficiaries who lived in transient low cost accommodation, most with young families. Secondly there were the farming families and business owners who were older with children away at school or at tertiary institutions.

Midwives noticed among the first group, an increase in women with complex social problems particularly associated with drug and alcohol abuse. Many midwives felt ill

equipped to support these women, particularly as social support services were less developed in the rural setting. These issues were complicated by many new families moving into the rural areas, attracted by employment in the dairy and tourist industries, having no local family supports.

D. Consumer support for the maternity services

All informants indicated that word of mouth was the main means women had of learning about the local maternity facility service. All facilities had developed brochures and one also had a website. One facility (the midwifery owned birthing unit) actively involved women in developing and directly promoting the service. The midwife also had a regular radio spot and hosted morning teas for pregnant women in her newly decorated birthing unit.

Midwives indicated that women in rural areas traditionally visited their GP rather than the midwife for a pregnancy test. Most women seemed to prefer privacy around early pregnancy. The close knit nature of rural populations coupled with the high profile of the local hospital would make visiting the midwife a public event. Some facility midwives had attempted to secure private entry into the birthing part of the hospital. However, women needed to know this was available in order to access the midwife.

E. Political environment around maternity service provision

In all but two localities most rural women travelled to the secondary hospital to birth, particularly for their first child. Midwife informants believed that competition for the LMC role antenatally between doctors and midwives contributed to this. While the doctors were withdrawing from birthing women locally, they appeared to be continuing to provide antenatal and postnatal LMC services whilst referring women to the secondary facility to birth. Women who wanted continuity of midwifery care had to seek out a midwife themselves. The perception of risk associated with a local birth was believed to be perpetuated by the information given to women on confirmation of their pregnancy test by the practice nurse and/or GP.

Informants from four facilities believed that the maternity service offered at their location was at risk of closure if the volume of births did not increase over the following 12 months. The two facilities, which had a steady volume of births, both engaged in community information and publicity about their service. The midwives had become personally recognisable in their communities. They had established clear relationships with the GPs, which identified midwives and their facility as the prime maternity service providers in the locality. Informants from these localities said that it had become normal

to birth locally and a woman birthing out of the area were asked by the locals what was wrong with them. They were assumed to be unwell or have a risky pregnancy.

Phase Three of the Scan Process: The Internal Environment of the Maternity Service

This phase involved assessment of trend and issues, threats and opportunities that have the potential to influence the development and need for the service within the local maternity setting.

A. Facility design

Six of the maternity services were located within new or refurbished facilities. None of these developments had been centred on maternity alone, but had formed part of hospital wide 'improvements'. Two of the new facilities had been poorly designed. They included small birthing rooms, no writing up or office space for the visiting midwives, and postnatal rooms which did not have sufficient room for the partner to stay. They had not involved midwives in the redesign and consequently did not recognise the implication of providing a midwifery LMC service from the facility.

Four of the facilities had the maternity beds close to other services, which enabled the midwife to access nursing support or cover when a woman was staying in postnatally. Two other facilities had their maternity beds isolated a distance from the rest of the hospital, which necessitated a staff member staying close by when a woman was in over night. Five facilities had altered their postnatal room furniture to encourage the partner and/or family to stay overnight, enabling the midwife to go home 'on call'.

All the facilities, other than the midwife's birthing unit, had birthing rooms separate from the postnatal rooms. Some of the facilities retained the original obstetric delivery theatres, in which women were expected to birth. Two facilities had water birthing and another offered a labouring pool. The other facilities had conventional baths that women used in labour.

Informants from the unmodernised facilities admitted that the longer they visited and worked in the facility, the more they became used to the deteriorating surroundings. They felt powerless to set about having the environment refurbished. None had approached local organisations for support to do this. They had been promised an upgrade for years, but had not been proactive about it.

B Management and administration

Midwifery co-ordination of facilities

Three of the facilities had an established midwife co-ordinator or a midwife manager role, while two facilities had some hours per week allocated for these functions. Within the six months prior to the scan, three facilities had allocated a midwifery LMC establishment role to an employed midwife. Two of these roles were appointed on 12 month contracts. The remaining three facilities did not have a designated midwife co-ordinator and the service management was informally taken on by one of the midwives.

Two of these latter services had hospital managers who required their employed midwives to establish midwifery LMC services. There seemed to be a philosophical conflict in these two facilities between the expectation of managers for their midwives to bring an income into the facility, and the concerns for clinical safety felt by these midwives who had not previously held total responsibility for a childbearing woman. This conflict was further compounded by the midwives seeming to set up in competition with their self- employed colleagues for whom they were legally expected to be available to provide back-up in the facility during a birth.

Management and monitoring of maternity services

Only one of the facilities had a formalised process in place to monitor the activities of the maternity facility, other than the 'birth book', which recorded each specific admission. No overview summary of birthing outcomes and other related activities was developed and few facilities had formalised 'booking' processes which meant that they were unable to forecast their workload. The activity data for the scan was generated out of the birth outcomes published in the '1999 Report on Maternity' (MOH 2001) on which the previous Tables have been based.

Only two facilities appeared to have in place systems for monitoring midwifery activities, including individual midwives' caseloads. Because some facilities were just establishing their midwifery LMC services with employed midwives, there was poor forecasting data on which to estimate the actual number of midwives required. Only one facility had an arranged caseload limit for employed midwives. This was set at the NZCOM recommended average of five birthing women per month.

Staffing of facilities

In all but two of the facilities, there did not appear to be any analysis or forecasting of staffing requirements. There were concerns about the need for more midwife LMCs as the GPs withdrew from practice. Most core midwives, at the time of the study, were not

looking forward to having to provide LMC services in the future. As they pointed out, they would have already been in self-employment if they wanted to be LMCs. There was concern expressed by self-employed midwives about who would provide midwifery back-up for them in the facilities if the core midwives were made to provide continuity. The logistics of these arrangements had not been worked through with midwives on a locality-wide basis.

C. Technology

None of the facilities had a maternity dedicated computer to store data or access the internet. Only two facilities had access to a computer for the midwives. All but one facility had a cardiotocograph machine. All had facsimile machines. Local self-employed midwives had mobile phones, but in some areas, there was no reception. New neonatal resuscitation equipment had been recently purchased in all but two of the facilities.

D. Interprofessional co-operation

All midwives clearly viewed themselves as being part of the community's maternity service even though seven facilities were located within community hospitals that also had aged care and rehabilitation beds. None of the midwives in these facilities were expected to undertake nursing roles, but nurses were expected to back-up the maternity service when women were staying in over night. All the midwife informants indicated they had a harmonious relationship with the facility nurses, but experienced tension at times with hospital managers who had little understanding of the complexity of providing midwifery LMC services while also providing back-up midwifery care in the facility.

The three facilities with exclusive midwifery LMC services appeared to have more harmonious relationships with local general practitioners (GPs). The localities where GPs continued to take an LMC role experienced most difficulties in maintaining constructive relationships. The informants were not clear about the reason, other than assuming that GPs believed that the core midwives gave the LMC midwives preferential treatment. There also appeared to be communication difficulties centred on expectations that GPs had of facility midwives. Poor quality booking information and late contact with the midwife made co-ordination of care with the GP difficult. Relationships between practice nurses and midwives did not appear to be well developed.

While seven facilities formed a network of maternity services that bordered on each other, the employed midwives had very little contact with each other. Most had not visited the other facilities. There was not an effective rural midwifery network other than that developed when midwives attended midwifery updates at either the base facility or the tertiary facility, which seemed to occur on an annual basis.

E. Midwifery professional development

All of the midwives in the facilities scanned were members of NZCOM and indicated that they relied heavily upon the College for advice and support. The midwives working in the community trust facilities were most reliant on the College and were increasingly using the Midwifery and Maternity Provider Organisation (an independent provider organisation linked to the College of Midwives) for claiming LMC payments and providing practice management advice. College meetings were held in the cities, too distant for any of these rural midwives to attend regularly. Some of the employed midwives also belonged to the Nurses Organisation, who provided them with industrial representation.

Continuing education

All facility midwives undertook annual updates in infant resuscitation, cannulation, pharmacology, emergency care and other clinically based topics. Most were run by the secondary facilities or the polytechnic. These sessions were very focused on clinical skill development. At the time of the study there was little opportunity for rural midwives to attend programmes aimed as building up leadership, service development and/or management skills.

Postgraduate study

Only three facilities had a midwife involved in postgraduate study. Midwives cited cost as the main factor inhibiting pursuit of further education[9]. These costs included:

- long distance travel to the venue (few live within daily commuting distance from a polytechnic or a centrally located venue),
- cost of accommodation required during the seminar/course,
- loss of earnings for independent midwives and cost of replacement staffing for employed midwives,
- childcare/family care arrangements while away.

[9] Following the scan Otago Polytechnic introduced a rural paper in their midwifery masters programme. A number of rural midwives enrolled in postgraduate study in 2002.

Midwives indicated an interest in a postgraduate programme that encouraged networking, knowledge-sharing and opportunities for rural midwives to develop their services.

PHASE FOUR OF THE SCAN PROCESS: DISCUSSION OF THE FINDINGS AND DEVELOPMENT OF STRATEGIES FOR STRENGTHENING MATERNITY SERVICES IN RURAL SETTINGS.

Thematic Analysis of Some Findings from the Scan

This phase involved the identification of key themes emerging out of the scan. These themes formed the basis for the development of strategies aimed at improving and consolidating the maternity services. Findings from the scan were sent back to the informants for comment, additional information and ideas for the development of strategies to enhancing and strengthening their maternity services.

Most of the changes made to the scan results by the informants related to local detail of volumes, costs and numbers which they seemed to have inquired about more fully following my visit. Some were able to complete a full twelve month data sheet on birth outcomes including transfer rates, once it had been explained to them by the researcher during the visit how they could access them.

The key themes that evolved out of the merged results of the scan process included:

- a lack of cohesion between providers of maternity services and interfacing service providers within each of the communities,
- low utilisation rates of the primary rural facilities by local women exacerbating their isolation from mainstream health services and the community,
- a perceived shortage of LMC midwives in the community in light of GP LMCs withdrawing services,
- a consistent lack of forward planning, organisation and management of the rural maternity facility services.

Each of these themes was analysed by the researcher and discussed with the informants. The identification of specific themes was difficult. Some seemed to merge into others, there did not appear to be discrete boundaries around any of the themes. Some were researcher-identified themes, which were substantiated by informants, and others originated from the informants during the initial scan process.

Discussion of Themes that Emerged from the Findings

Table 4.4. Summary of Key Findings from the Contextual Scan

KEY FINDINGS FROM THE SCAN

1. A lack of cohesion between providers of maternity services and interfacing service providers.
2. Low utilisation rates of the primary rural maternity facilities by local women exacerbating their isolation from mainstream health services and the community.
3. A perceived shortage of LMC midwives in the community, in light of GP LMCs withdrawing services.
4. A consistent lack of forward planning, organisation and management of rural maternity facility services.

Lack of Cohesion Between Providers of Maternity Services and Interfacing Service Providers

The lack of ongoing, collegial relationships developed by hospital-employed midwives with some self-employed midwives, GPs, practice nurses, facilitators of childbirth classes and non-pregnant consumers constituted a strong theme repeated in all but two of the services. When this was brought to their attention, many of the midwives admitted that they had not considered such relationship-building part of their job previously.

Interestingly, most of the self-employed midwives had developed quite entrepreneurally, with brochures, regular networking, and signage outside their houses as well as advertising in the local telephone book and newspapers. They demonstrated their sense of ownership of their business. The employed midwives did not feel they 'owned' the service, nor that they had any responsibility to promote it.

The experience of the scan, including exposure to the bigger picture of their service, enabled employed midwives to see that if they did nothing to increase the visibility and congeniality of their service, through networking and relationship building with referrers and users, the viability of the service and their employment would be under threat.

Relationships between midwives seemed most constructive and collegial when:

- the self-employed midwives were the only midwifery LMC providers accessing the facility,

- only employed LMC midwives accessed the facility and there were no self-employed midwives in the locality,
- a midwife owned the facility and employed the midwives,
- a midwife owned the facility and enabled self-employed midwives to access it to birth their women,
- there was only one birthing facility in the locality.

Achievement of one of these states would seem to enable a better relationship between the main maternity service providers in the locality.

Low utilization rates of the primary rural maternity facilities by local women exacerbating their isolation from mainstream health services and the community.

In keeping with the principles of complexity theory, the boundaries of the maternity service were difficult to locate and transient in nature. The maintenance of artificial boundaries by employed midwives when there was no GP involvement in maternity care, seemed to isolate the maternity service to its detriment. Lack of information on, and consequently the lack of understanding employed midwives had of their service utilisation rates, probably contributed to their lack of action over the steady decline of the service.

Problems experienced by the maternity services, however, seemed to provide a microcosm of problems within the rural health sector generally. A review of articles in the 'Health Manager' (a monthly publication on the New Zealand health service issues), 'New Zealand Doctor' (a fortnightly medical magazine) and the 'New Zealand Medical Journal' from 1997 to 2002, indicated that maternity service provision was the least of the GP's problems.

Recruitment and retention of rural doctors was a big issue (Pearson, 1997; London, 2001 & 2002; Hill, Martin & Farry, 2002) as was the reconfiguration of GP services around the community trust model or Independent Provider Organisations, which required the GPs to take an active part in their management and governance (Pearson, 1997a & b; Topham – Kindley, 1999; Sijnja, 1998). Despite this, GPs were not keen to 'give up' maternity easily. Such headings as 'Maternity mess seen through rural GPs eyes' (Malloy, 1997) and 'GPOs thrown out with the bath water' (Wendley, 1999) did little to engender good relations between midwives and doctors in rural settings.

Between 1998 and 1999 there were a number of 'reviews of rural maternity services' (Topham – Kindley, 1999; Hill, 1999; Wendley, 1999) reported by the New Zealand Doctor. These reports indicated a deterioration in the relationships between midwives

and doctors as the self-employed midwives increased their role in maternity service provision. Concern was expressed that the midwives were taking work away from doctors. This included concern that a new birthing unit, established by a midwife, was competing for local public funding, putting under threat the local hospital service (Topham – Kindley, 1999). The rural maternity hospital referred to in this article was included in the scan, and was the most dilapidated and poorly equipped of all the nine facilities scanned.

Support for intrapartal maternity service provision in rural areas without medical involvement was also a continuing theme in these publications. For example, the following quote provides an example of a consistent theme '...desirability of medical involvement in low risk deliveries is borne out not only by consumer opinion, but also by the significant and continuing risk of important unexpected obstetric and paediatric complications that require medical management' (Hill, 1999p24).

An article by Tilyard, et al. (1988) printed in the New Zealand Medical Journal in 1988, also seemed to consistently carry weight in decision-making on the safety of birthing in a rural setting. Based on a study of 1163 urban women and 389 rural women, the authors claimed that a practitioner conducting less that twenty birth per year, was more likely to transfer care to a specialist and have a 'less favourable outcome for maternal and neonatal morbidity' Tilyard et al., 1988; 207). Interestingly, this research also indicated that women and neonates birthing in rural areas had a lower morbidity rate.

A similarly famous New Zealand article, that was less often cited in local medical literature, was published in 'The Lancet' entitled 'Is obstetrics safe in small hospitals: Evidence from New Zealand's regionalised perinatal system' (Rosenblatt, Reinken & Shoemack, 1985). Analysing the outcomes of 206,054 births that occurred in New Zealand between 1978 and 1981, these researchers found that small rural units appeared to be safer, for all but very low birth weight babies to be born in, than the better equipped hospitals to which they refer. They also stated that 'There is no evidence that a satisfactory outcome depends on a minimum number of deliveries' (Rosenblatt et al., 1985p429).

Overall, it appeared that there were a number of factors at work serving to isolate local maternity services, particularly once the GPs gave up obstetric practice. Involvement of the GPs in the governance of local health trusts potentiated an obstruction to allocation of resources for maternity facility development.

The choice of women to birth in the city, particularly for their first birth, cannot be overlooked. The perceived risk of birth portrayed in the media must also have a part in this global trend (Topham – Kindley, 1999; Christie, 2002; Walsh, 2001) towards birthing in a high tech-environment.

A Perceived Shortage of LMC Midwives in the Community in light of GP LMCs Withdrawing Services

The issue of a midwifery LMC shortage seemed to have been clouded by the desire of some facility managers to obtain access to Section 51 funding through their employed midwives. The repercussions of this move on the relationship between these midwives and LMCs had not seemed to be thought through. Neither had the rationale for these employed midwives choosing to stay employed on shift work been considered. Self-employed midwives involved in the scanning process in those areas where the employed midwives were setting up as LMCs, indicated that they had not been consulted over the process, or asked if they could sustain an increased workload as the GPs left the service.

The general consensus was that the shortage was artificially created, particularly given that the local birth numbers had been falling, there were more midwifery graduates entering self-employment, and the existing midwife to birth ratio in the scanned areas was manageable. Even if the employed midwives were the only ones providing LMC services in the scanned areas and they gave care to all the birthing women and the postnatal transfers, the ratio would stand at about one midwife to 34 women a year. The New Zealand College of Midwives recommendation for a full-time LMC midwife is a case load of 50 women per year.

There was no evidence that any of these facilities had problems trying to recruit LMC midwives, they had problems maintaining them. One informant who was a new recruit, complained that it was difficult for her to enrol a sufficient caseload, because of the competition with self-employed midwives. She also felt she had divided loyalties. The constraints of trying to maintain the facility for the self-employed midwives, as well as provide LMC services for her women, put extra stress on her. She left the service to become self-employed soon after the scan was completed.

A consistent lack of forward planning, organisation and management of rural maternity facility services

This seemed to be less of a problem for facilities where the employed midwives were also the only midwifery LMC providers. This pointed to a connection between providing LMC services while maintaining the facility and being organised. In addition, it also indicated that providing midwifery services for their own women and GP LMCs, was less complicated and more predictable, than having to also provide a service for LMC midwives.

The employed midwives who did not provide LMC services were reliant on business being brought to them by others. Many of these midwives and the managers felt a sense of powerlessness in this position, particularly with falling birth numbers locally. Hence the decision to send these midwives reluctantly out to bring in some business as LMC providers, was understandable. The logistics of this, however, were generally not well thought through.

An absence of marketing and strategies to raise the visibility of the service and to make it more attractive for consumers was evident in all but two of the services. Interestingly these two services, had obtained the bulk of birthing women in their localities. In both instances, the midwives had vested interests in staying in the area. One had purchased and refurbished the building, and in the other, the employed midwives had become involved in the local community and purchased property.

The combination of a lack of a sense of ownership, poorly developed leadership skills and a failure to transition from a nursing role to a midwifery one seemed to be consistent features shared by most non-LMC employed midwives in all the maternity facilities scanned. Walking into these facilities, it felt to the researcher as if time had stood still. The services were not evolving to meet environmental needs, they were becoming extinct, along with the midwives who had worked within them for many years. Twelve months following the scan, one of these facilities was closed.

While there are many more themes that could have been gleaned out of the scan, the above themes were the main ones agreed to with the informants. They believed that there was enough potential within these issues raised to develop strategies to enhance and strengthen their services. The identification of more and broader issues, would have been overwhelming for them. They wanted to tackle local, manageable issues.

STRATEGIES FOR STRENGTHENING MATERNITY SERVICES IN THESE RURAL SETTINGS

The following consists of a list of the shared strategies developed in conjunction with the informants as the final part of the scan process.

TABLE 4.5. STRATEGIES FOR STRENGTHENING RURAL MATERNITY SERVICES

STRATEGIES FOR STRENGTHENING RURAL MATERNITY SERVICES
1. Encourage and enable women to use their local maternity service.
2. Set up a professional development programme for rural midwives.
3. Support facility development and the transition to provision of LMC midwifery services where there is a demonstrable need.
4. Develop a rural midwifery locum service.
5. Provide an analysis of the maternity workforce in the rural setting.
6. Develop a mechanism for rural midwifery networking.

1. Encourage and enable women to use their local maternity service:

- develop local support networks for rural maternity services,
- encourage women to actively support their local maternity service,
- provide information on local maternity services,
- inform local medical practitioners and practice nurses of the midwifery LMC role.

This strategy required the midwives to look at marketing strategies and review their role as promoters of their service. They needed to develop strategies for exposing their facility to the community more.

2. Set up a professional development programme for rural midwives:

- provide regular midwifery practice updates,
- develop a postgraduate midwifery programme for rural midwives.

This strategy recognised the need for midwives to expose themselves to ongoing education and professional development, not just clinical skills updating.

3. Support facility development and the transition to provision of LMC midwifery services where there is a demonstrable need:

- develop rural maternity facility management systems,
- identify ways to manage maternity facility workforce.

This would involve quite an undertaking, but by the time the scan was completed, the midwives had already set up systems to record, report on and predict their activities.

Some were also able to convince managers of the need to support existing LMC midwives rather than setting up new services in competition.

4. **Develop a rural midwifery locum service:**
  - identify practitioners willing to locum in rural areas, e.g. midwifery lecturers who could combine roles during semester breaks,
  - co-ordinate leave to match locum availability.

This unexpected strategy was developed by midwives who felt that such a system would enable more of an exchange of ideas and practices into the rural areas, while giving rural midwives time out to attend networking and professional development activities.

5. **Provide an analysis of the maternity workforce in the rural setting:**
  - scan the workforce profile and projected requirements over the next 5 years.

This strategy would require some expertise and was considered to be ideal as a postgraduate project.

6. **Develop a mechanism for rural midwifery networking**
  - set up a formal process for linking rural midwifery providers in the South Island,
  - enable the network to have a tangible influence on the development and maintenance of maternity and midwifery services within the rural setting.

The news of other facilities and the informal networking that took place during the process of the scan, sparked an interest in continuing communication with colleagues.

CONCLUSION

The scan indicated that midwives were interested in strengthening and developing the services they offered to rural women within their localities. Most were hopeful of increasing the birthing volumes once the GPs left maternity services to midwives. It would, however, seem likely that without immediate support for these midwives and the services they provide, a number of these rural facilities risk closure by the DHBs within the foreseeable future.

Closure of rural maternity facilities will probably result in midwives leaving the district. The volume of antenatal and postnatal care services they will be left to provide for women forced to birth in the cities, will be insufficient to provide them with a livelihood. Midwifery will again be lost to rural settings without the small facilities as a focal point for birth. Local women will be required to travel long distances to birth in the cities,

reinforcing the concept of birth as a medical, rather then family event. This will also increase family costs and social disruption.

Midwives have indicated a desire to provide continuity of midwifery care for rural women within their own locality, the only way to achieve this is to support the development of midwifery LMC services in these communities.

A Postscript to the Scan

A number of initiatives were undertaken as a result of the interest generated following the scan.

TABLE 4.6. KEY RISKS TO RURAL MATERNITY SERVICES AND ACTION TAKEN

RISKS	ACTION TAKEN TO MITIGATE
Isolation of rural midwifery practitioners preventing informed adaptation of local maternity services.	⇒ NZCOM successful with a funding application to develop strategies for supporting rural LMC midwives. ⇒ The role and function of the Midwifery and Maternity Provider Organisation was strengthened at a national level.
The closure of maternity hospitals in rural communities.	⇒ A postgraduate midwifery education programme was modified and extended to enable individual midwives develop and operationalise strategies for services maintenance.
Breakdown of midwifery LMC services in rural localities.	⇒ A postgraduate midwifery education programme was adapted to enable individual midwives develop their leadership and management skills

The following summarise some of the actions taken following analysis and discussion of the scan findings with colleagues in the New Zealand College of Midwives and at Otago Polytechnic where I was working as a postgraduate midwifery lecturer. It should be noted that a multifaceted approach to organisational threat is supported by the principles of complexity theory. A number of these actions will be elaborated on in more detail in subsequent parts of this portfolio.

The risk to midwifery and for women in the breakdown of LMC midwifery service provision in rural areas helped form the decision by the NZ College of Midwives to apply to the Ministry of Health for funding.

The researcher was involved in the drafting of a successful proposal for funding to the Ministry of Health for the College to strengthen its structure to ensure a quality midwifery service was supported in all settings in the country, including rural areas.

The role and function of the Midwifery and Maternity Provider Organisation (MMPO) was also strengthened. This organisation seemed have provided logistical support to rural midwives, employed and self-employed. The development and function of the MMPO will be explored in Part Seven of this portfolio.

A proposal was lodged with the Clinical Training Agency for funding for rural midwives to undertake postgraduate studies.
Argument was made on an equity basis with rural doctors and nurses for a share of a rural education subsidy to be given to rural midwives. In this case the authority choose to make the distinction between nursing and midwifery in declining the application.

Development of a postgraduate rural midwifery paper
A postgraduate Diploma in Midwifery was developed by Otago Polytechnic with a paper developed specifically for the rural midwives. Fifteen South Island rural midwives commenced postgraduate studies in 2001. Many of the strategies mentioned above have been developed further for action by midwives in the course.

The issue of leadership and management skills was explored in a paper which forms Part Five of this portfolio.
A postgraduate leadership paper was developed by Otago Polytechnic to be included in the Masters of Midwifery programme. Exploration of the notions of leadership particularly as they relate to women and midwives, is presented in Part Five of this portfolio.

A report on the contextual scan was presented to the NZCOM conference in Dunedin in 2002 and published in the New Zealand College of Midwives Journal in April 2003.
This publication attracted the attention of both the Ministry of Health and the District Health Board members who have a concern and an interest in the maintenance and even re establishment of services within primary and rural settings as a strategy to reduce the rising childbirth intervention rate (a copy of this article is located in Appendix Seven).

REFERENCES

Abel, S. (1997). *Midwifery and maternity services in transition: an examination of change following the Nurses Amendment Act.* PHD Thesis. University of Auckland.

Abel, S., & Kearns, R. (1991). Birth Places a Geographical Perspective on Planned Home Birth in New Zealand. *Social Science in Medicine* 33:7 p825-834.

Blank, R. (1994). New Zealand and health policy. *Oxford Readings in New Zealand Politics.* Auckland:Oxford University Press,

Byrne, D. (1998) *Complexity theory and the social sciences: an introduction.* London: Routledge.

Campbell-Hunt, C. (!998). Complexity a Theory of Everything for Strategy and Strategising? *New Zealand Strategic Management* Spring p34-38.

Campbell-Hunt, C. (1999) Complexity the Implications for Strategy and Strategists. *New Zealand Strategic Management* Winter p13-23.

Campbell, R., & Garcia, J. (1997) *The organisation of maternity care: a guide to evaluation.* GB: Hochland & Hochland.

Cheyenne, C., O'Brien, M., & Belgrade, M. (1997). *Social policy in Aotearoa New Zealand: a critical introduction.* Auckland: Oxford University Press.

Christie, B. (2002) Practice in remote areas could disintegrate, report says. *British Medical Journal* Feb p342-348

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

Flint, C. (1993). *Midwifery teams and caseloads* Oxford: Butterworth-Heinemann Ltd.

Guilliland, K. (1998). *A demographic profile of independent (self-employed) midwives in New Zealand Aotearoa.* Masters Thesis. Victoria University. Wellington.

Hartley, S. (2000). Midwives say country service stretched. *Otago Daily Times.* Sept 29

Hartley, S. (2000). HFA recognise problems of rural midwifery service. *Otago Daily Times.* Sept 29

Health Funding Authority. (1996). *Notice issued pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand

Health Funding Authority. (1998). *Notice issued pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand

Health Funding Authority. (1999). *Maternity facilities service specification.* Wellington,

New Zealand

Health Funding Authority. (2000). *Maternity services a reference document.* Wellington New Zealand

Hendry, C. (1995). Burwood continuity of midwifery scheme. *New Zealand College of Midwives Journal.* (13) p14-16

Hendry, C. (1996.) Continuity of Midwifery Care. *Primary Healthcare in New Zealand* 43-44

Hill, S. (1999). NZMA to help Kaipara with maternity services. *New Zealand Doctor.* Sept 29

Hill, D., Martin, I., & Farry, P. (2002). What would attract general practice trainees into rural practice in New Zealand? *The New Zealand Medical Journal.* (115) n1161

London, M. (2001). New Zealand rural health workforce – what solutions? Health Manager (8)1 p14-15

London, M (2002) Incentives for rural practice. *New Zealand Medical Journal.* (115) n 1161

Malloy, T. (1997). Maternity mess seen through GP's eyes. *New Zealand Doctor,* August 6

McKissock, D. & McKissock, M. (1998). *Bereavement counselling: guidelines for practitioners.* Australia: The Bereavement C.A.R.E. Centre.

Ministry of Health. (2001). *Report on maternity 1999.* Wellington, New Zealand.

Ministry of Health. (2000). *New Zealand Health Strategy,* Wellington, New Zealand.

Ministry of Health. (2001). *New Zealand primary health strategy.* Wellington, New Zealand.

Ministry of Health. (2002). *Maternity Services: notice pursuant to Section 88 of the Public Health and Disability Act 2000.* Wellington, New Zealand

New Zealand Government. (1986) *Obstetric regulations.* Wellington New Zealand

New Zealand Government. (1990). *Nurses Amendment Act,* Wellington, New Zealand.

New Zealand Regional Health Authorities (1993) *First steps towards an integrated maternity services framework.* Wellington: Report by Coopers and Lybrand.

Page, L. (1993). *Effective group practice in midwifery: working with women* Oxford:Blackwell Science.

Page, L., & McCourt, C. (1996). *Report on the evaluation of one-to-one midwifery Hammersmith Hospital.* London.

Pairman, S. (1998). *The midwifery partnership: an exploration of the midwife/woman relationship.* Masters Thesis. Victoria University. Wellington.

Pearson, H. (1997). Health reforms bring rural doctors together. *New Zealand Doctor,* August 6

Pearson, H. (1997). GP's gate keeper role likely to be retained. *New Zealand Doctor.* July 23

Rosenblatt, R., Reinken, J., & Shoemack, P. (1985) Is obstetrics safe in small hospitals? *The Lancet* August. p429 - 421

Sijnja, B. (1998) Clutha health project born from the ashes. *New Zealand Doctor,* March 18

Tilyard, M., Williams, S., Seddon, R., Oakley, M., & Murdock, C. (1988). Is outcome for general practitioner obstetricians influenced by workload at locality? *New Zealand Medical Journal* April 207 – 209

Topham-Kindley, L. (1999). Central Otago reviewing GPO maternity service. New Zealand Doctor , Sept 15

Topham-Kindley, L. (2001). Southern maternity scheme a life saver in *New Zealand Doctor* , Feb 28

Tully, E. (1999). *Doing professionalism 'differently': negotiating midwifery autonomy in Aotearoa/New Zealand.* PHD Thesis, Canterbury University, New Zealand.

Waldrop, M. (1992). *Complexity: the emerging science at the edge of order and chaos.* UK: Simon & Schuster.

Walsh, D. (2001). Fear of Labour and birth. *British Journal of Midwifery*

Wendley, S. (1999). GPOs thrown out with bath water. *New Zealand Doctor,* Oct 6

Part Five:
OPTIMISING MIDWIFERY LEADERSHIP POTENTIAL WITHIN THE CURRENT NEW ZEALAND MATERNITY SERVICE ENVIRONMENT

CONTEXT

The development of this component of the professional doctorate occurred in 2001, following the writing up of the initial findings of the contextual scan of rural maternity settings. At the same time I was also part of a multidisciplinary research project, commissioned by the Clinical Leaders Association of New Zealand (CLANZ) and funded by the New Zealand Ministry of Health, focusing on leadership in District Health Boards (DHBs) and Independent Provider Organisations (IPAs). The budget for the various IPA activities were at the time being devolved to the responsibility of the 21 District Health Boards across the country.

The initial 1993/4 health reforms in New Zealand which introduced competition into the health 'market' (outlined in Part One of the portfolio), wiped out the majority of clinical leadership positions within the health sector (Malcolm, Wright, Barnett and Hendry, 2001b). Nursing and medical directors posts, along with those associated with these positions were disestablished. Managers from outside the health sector were brought in to develop health services into business enterprises. This eventually led to concern over the lack of voice given to clinicians in health management decision-making, particularly in the light of resource allocation being devolved to regional level (Malcolm et al., 2001b). In 1997, a New Zealand anaesthetist, Robin Youngson, concerned by the growing power of managers in clinical decision-making and the lack of clinical leadership models within the health sector, set up the Clinical Leaders Association of New Zealand (CLANZ). I was invited to join while employed as manager of a maternity service. In 2000, although no longer employed in the clinical setting, I remained involved in the organisation and became a Board member.

Membership of the CLANZ Board, exposed me to multidisciplinary issues as they related to place of clinicians in health sector planning and management. The contextual scan process undertaken in 1999 had given me further cause for concern about the level of leadership remaining in maternity facilities. It seemed that most of the entrepreneurial midwives had moved into self-employment, preferring to run their own health business rather than work as employees or employed managers of services.

Because of my growing interest and research in the area of leadership, I was asked to develop a postgraduate midwifery course on leadership to be offered in 2001 by the Otago Polytechnic School of Midwifery. The course evolved out of the work undertaken in this section of the portfolio.

The main aim of this project was to develop a profile of leadership skills and attributes that would best equip midwives to maximise maternity service development potential within the complex environment of the New Zealand health sector. These findings would then inform the development of postgraduate midwifery courses.

INTRODUCTION

Leadership had been a popular topic in New Zealand management literature during the late 1990s, with more than 70 articles written in local publications alone (Parry & Proctor, 1999). Parry and Proctor (1999), following their survey on leadership in New Zealand organisations in 1999, contended that this explosion of interest in the subject had arisen because of the scarcity of leaders in this country and a reliance on filling top management jobs with overseas 'leaders'. Many, who had worked in the health setting in New Zealand at the time, would have witnessed these foreign 'experts' taking key roles in both healthcare provider organisations and within the health funding authority.

This healthcare leadership seemed to ignore the unique features of the country, its people and its systems. The New Zealand culture consists of a blend of post-colonialism strongly influenced by the growing profile of Maori as they regain sovereignty over their land and aspects of their lives, including the management of resources for social services such as healthcare. We are a small nation of just under four million people, spread over an area larger in landmass than the United Kingdom. Concern over the lack of (or lack of recognition of) 'home grown' leaders prompted the commissioning of two comprehensive surveys on the subject which were both carried out in 1999 (Parry & Proctor, 1999; Jones, Boyd & Raymont 1999). Both surveys were national in their focus. While one investigated the generic concepts of leadership in this country (Parry & Proctor, 1999), the other was carried out specifically in the health sector (Jones et al., 1999).

The discussion that emerged out of these surveys seemed very applicable to midwifery in New Zealand as we embarked on a separate path to nursing. It was evident there was an increasing need to develop leaders out of a small workforce. The following

activities which will have direct impact on midwifery, highlight the urgent need in this country for skilled and confident midwifery leadership:

- the establishment of a separate midwifery council in New Zealand (Health Practitioner Competence Assurance Bill, NZ Govt., 2001),
- continuing progress in the maintenance of the midwifery schools/departments separate from nursing,
- the redevelopment of the national health system into a more regionalised model,
- the amalgamation and growth of midwifery practitioner organisations and practices,
- the rapid and relatively uncontested introduction of new technology around childbearing.

Direction on the most appropriate way to manage these issues will require more creative and entrepreneurial midwifery leadership in order to ensure the continued development of the profession and services offered to childbearing women.

In response to this challenge, this part of the portfolio sets out to undertake a review of contemporary literature to inform discussion around definitions of leadership. Concurrently, a profile of the attributes, skills and actions of 'leaders' within the contemporary organisational environment will also be developed. Complexity theory applied to this will provide a conceptual framework for critique of these findings and exploration of their relevance to midwifery leadership within the New Zealand health setting. Finally a course outline will be presented, based on these findings.

THE NOTION OF LEADERSHIP

Definitions of leadership vary depending on the environment in which the leader is expected to function. The notion is contextual because leadership is a dynamic process (Brody, 2000). Rather than focusing exclusively on the qualities or attributes of the individual, the relationship between people in an organisation also needs to be examined. Within large organisations, leadership at all levels must be considered (Parry & Proctor, 1999; Jones et al., 1999). 'Learning, listening, coaching and experimenting are valued from leaders who can network with other leaders and who can foster a climate which fosters leadership' (Jones et al., 1999p5). Jones et al., (1999) in their report on clinicians in management and leadership roles identified five fundamental practices of effective leadership derived from international literature on the subject (refer to Table 5.1).

TABLE 5.1. FIVE FUNDAMENTAL PRACTICES OF EFFECTIVE LEADERS.

FUNDAMENTAL PRACTICES OF EFFECTIVE LEADERS[1]
1. *Leaders challenge the process*: they search for innovative ways to improve the organisation.
2. *Leaders inspire a shared vision:* they passionately believe that they can make a difference.
3. *Leaders enable others to act:* They foster collaboration, team building and collaboration. Mutual respect is a key component of their attitude.
4. *Leaders model the way:* they have clear values, set examples and create opportunities for achievement.
5. *Leaders encourage the heart:* they recognise the contributions of others and celebrate achievement.

While Jones et al (1999) focused on the functions of a leader, a search of the literature by Parry and Proctor (1999) identified six key factors that facilitated these functions (refer to Table 5.2).

TABLE 5.2. FACTORS THAT FACILITATE LEADERSHIP FUNCTIONS

FACTORS FACILITATING GOOD LEADERSHIP[2]
1. An organisational culture that nurtures and values individuals demonstrating leadership,
2. Exposure to the practices of both transformational and transactional leadership styles as the organisational environment requires,
3. Shared values between leaders and followers,
4. Ethical practice,
5. The means to maximise good organisational ability,
6. The opportunity to function as a good optimiser, enabling adaptability and demonstration of skills to enhance the capability of others.

[1] Jones et al., 1999
[2] Parry & Proctor 1999

The Methods Used To Analyse Current Literature On Leadership

In order to develop a profile of leadership, which may be of value in midwifery planning and professional development, a broad review of current literature on the subject of leadership was carried out. Sources were not restricted to midwifery or nursing. Particular interest was focused on articles and reports on leadership issues which:

- originated in New Zealand, in order to incorporate literature which would likely recognise the unique cultural context of leadership in this country,
- focused primarily on leadership, rather than on management,
- included comparative reviews of women in leadership roles,
- were published mainly within the previous five years.

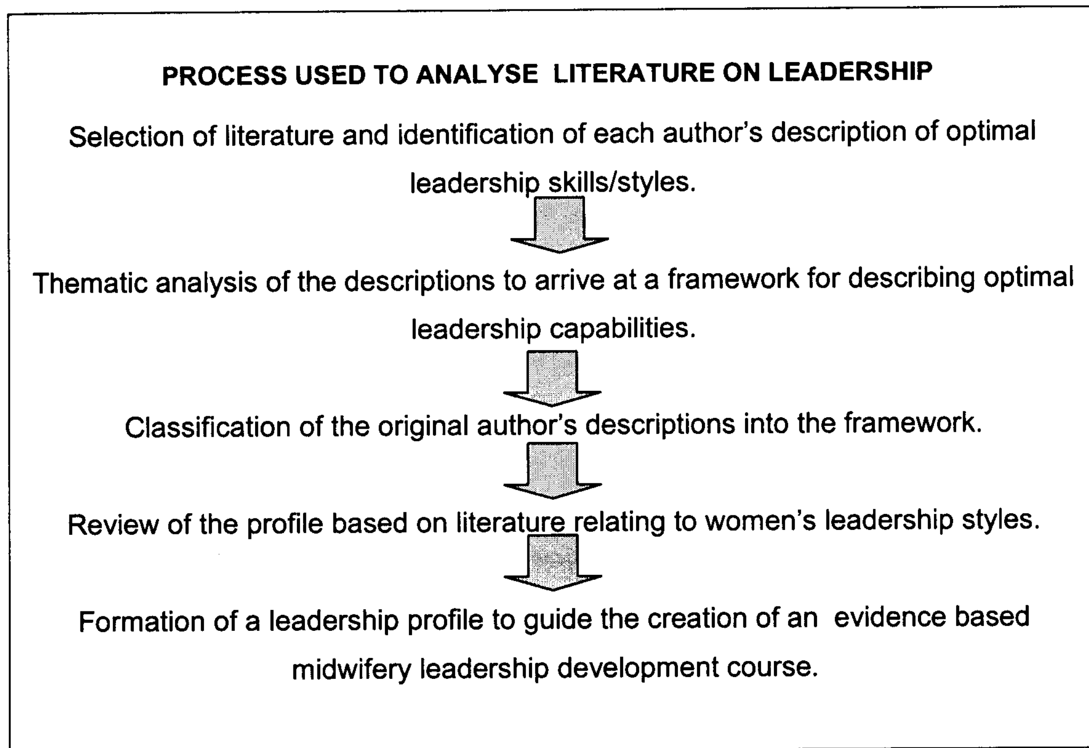
The literature sources were obtained through general internet searching, CINHAL, Proquest and library hand searches. In total twenty-seven articles and books including two New Zealand leadership research reports were chosen for inclusion in the analysis of leadership attributes, characteristics and activities. This analysis occurred in four stages. The preliminary phase involved simply listing the descriptions of optimal leadership skills/style, given in each article, onto a spreadsheet. In the second phase, the descriptions obtained using this process, were sorted and analysed thematically to identify a framework for classification of the descriptions. This process identified three major categories, which were:

1. Personal attributes of leaders.
2. Leadership competencies.
3. Actions of a leader.

Subcategories were developed under each of these headings which enabled a more multidimensional picture of 'leadership' to be created.

The third phase involved reclassifying the descriptions into the categories which, in the final phase, were reviewed against descriptions in the literature on womens leadership styles that may be particularly applicable to midwifery leadership. At each stage of this classification and refinement process, the articles were again reviewed to determine what more they could contribute to the profile. The outcome of this process centred on the creation of a leadership profile which could inform an evidence based midwifery leadership development course.

TABLE 5.3 PROCESS USED TO ANALYSE LITERATURE ON LEADERSHIP



LITERATURE REVIEW FINDINGS : A LEADERSHIP PROFILE

1. PERSONAL ATTRIBUTES OF LEADERS

There is a good deal of contention in the literature as to whether leadership in an innate quality or is something that can be taught (Jones et al., 1999; Parry, 2000; Brody 2000). It appears that certain personal qualities enhance leadership capability and that women possess more of them (Jones et al., 1999; Brody 2000; Lougheed, 2000: Antonioni, 2000). Reflecting on the nature of these qualities distilled from the literature, it may be that those without a number of these attributes would not consider pursuing leadership positions.

The most commonly described attributes in the literature seemed to fall into two main categories; attitudinal and intellectual.

Attitudinal traits

These traits most commonly identified included: Conscientiousness, (Tossman, 2000; Parry, 2000) a positive outlook (Brody, 2000) initiative (Marlow, 2000; Jones et al., 1999), reflexivity (Weaver & Sorrell-Jones, 1999), adaptability (Antonioni, 2000; Hackney & Hogard, 1999), integrity, (Antonioni, 2000; Hackney & Hogard, 1999) and resilience. The concept of resilience appeared frequently in the literature. De Trude

and Stanfield (2000) described it as the ability to rebound from hardship, while Marlow, (2000) used the concept of tenacity to further describe this attribute.

Intellectual abilities
These abilities most frequently described included: 'Emotional intelligence' (Murphy, 1996) which is variously described as the ability to manage self in relation to others. Parry and Proctor (1999) described the notion of 'intellectual inspiration' to describe the notion of being able to lift the intellectual capabilities of others. The concrete abilities of conceptual and analytical thinking (Marlow, 2000; Tossman, 1999) also appeared frequently in the literature. These skills were related most specifically to the visionary and strategic activities displayed by effective leaders.

The literature seemed to support the existence of some basic personal attributes of those successfully managing in leadership positions, that appeared to augment and sustain their performance.

2. LEADERSHIP COMPETENCIES
Three categories of competencies were identified from the literature. The first group would best be described as professional competencies.

Professional competency
While midwifery, nursing and health management literature (Jones et al., 1999; UK Health Service Document, 1999; Gilland, 1999; MIDRS, 1999) called for professional competence among leaders, business leadership literature also identified this as an important feature of leaders (Linver, 1994; Murphy, 1996; Parry, 2000). Detailed knowledge and skills relating to the leader's business or profession was seen to play an essential part of gaining credibility among those being led. Professional competency is most usefully articulated as consisting of the ability to work autonomously and to activate and maintain strategies that continue developing and shaping the service/industry.

Being able to work autonomously includes making critical judgements where precedents do not exit, advising and supporting others where standard protocols do not exist and being able to take action without recourse to others. The implication being that when decisions have to be made and action taken, a leader would have the professional competence and knowledge to manage this type of situation with confidence.

The ability to develop professional practice/achieve progression within the industry was demonstrated by sharing expertise and working as a resource, assisting with integration of theory into practice and the ability to apply research to practice. The ability to effectively take part in clinical governance and similar strategic development activities are also considered to form part of professional competency. This included the ability to work across organisational and professional boundaries, and have an awareness of the politics and the processes required in order to achieve and maintain an autonomous profile for the profession/industry within a multidisciplinary environment.

Competency in monitoring and maintaining their own performance

Over the last few years more of a focus has been placed on the importance of self development and activities that enable leaders to monitor and enhance their own performance (Jones et al., 1999; Nevins & Stumpf, 1999; Parry, 2000; Seligman, 2000; Tasker, 2000). Reflective processes are identified most commonly in relation to this competency include mentorship, seeking formal and informal feedback, self analysis and active career planning to enhance skill development.

Management Competency

There appears to be some debate as to whether leadership and management are interchangeable. Most of the authors describe the leadership qualities, attributes and actions as an 'add on' to basic management functions which distinguish a leader from a manager. While leaders are expected to be able to demonstrate management skills and competency, basic management skills alone, do not appear to effect the actions that a leader can motivate (Peters, 1997; Jones et al., 1999; Parry, 2000). Taffinder (1995) provides an interesting distinction between the two, by claiming that in comparison with leaders, managers would spend less time in self analysis, their prime role being to control and maintain stability within the organisation and among others. Taffinder (1995) claims that most managers do not appear to aspire, nor achieve leadership status, because they feel most comforted working within routinised/structured frameworks. Leaders strategise, while managers operationalise the strategy at the local level.

Leaders need to be able to deal with unique problems (Linver, 2000; Parry & Proctor, 1999). These abilities are demonstrated by creating precedents, strategic risk-taking, dealing with ambiguity, supporting innovation and viewing challenges as opportunities. Leaders using these strategies will be able to develop and activate processes to manage unprecedented problems.

The ability to manage human resources is another competency identified as essential for a leader (Jones et al., 1999, Proctor & Parry, 1999; Marlow, 2000; Lanser, 2000; Antonioni, 2000). The abilities to motivate people to perform constructively, to deal with difficult people and facilitate conflict resolution are all important when working in the unpredictable environment that change creates. Most of all, a leader is one who is identified so by followers, therefore, if people management is not a skill, followers will be less likely to appear.

Communication and negotiation skills have also been identified as necessary for leadership (Parry & Proctor, 1999; Brody, 2000; Jones et al., 1999; Linver, 1996; Marlow, 2000; Antonioni, 2000). Time spent networking both internally and externally are identified as crucial. Such activities as staying in touch with people, listening, meeting with other leaders, maintaining partnerships with others, encouraging open discussion are all seen as proactive communication strategies of leaders. The ability to articulate and interpret a vision or the strategic plan are vital. Motivation through communication facilitates leadership and engages a following.

3. LEADERSHIP ACTIONS

Many authors identify the action of focusing strategically as a key distinguishing action of leaders from managers (Sorrells-Jones & Weaver,1999; Lanser, 2000; DeTrude & Stanfield, 2000; Marlow, 2000; Antonioni, 2000). This is variously described as taking action rather than reacting, looking into the future, challenging current processes, communicating the big picture, the vision, and partnering with the target market.

Taking particular actions which inspire and motivate others was identified with leadership by Parry (2000), Jones et al., (1999), Parry and Proctor (1999) Marlow (2000) and Weaver and Sorrell-Jones (1999). The notion of transformational leadership appears to encapsulate this concept. Parry (2000) describes this as a process of encouraging a belief in the capabilities of followers to perform at a higher level. Facilitating a positive outlook plays an important part in motivating others to support action.

Facilitating change appears to be a key expectation of leaders (Jones et al., 1999; Parry & Proctor, 1999; Weaver & Sorrell-Jones, 1999; Brody, 2000; Linver, 1994; Parry, 2000; Marlow, 2000). This includes managing the environment, which includes both physical and human resources and managing the gap between reality and the vision. Prioritising, defining goals, setting firm but realistic deadlines, staying close to

the action and encouraging a proactive ethos, all appear to facilitate leadership of a constructive change process.

Commitment to excellence was also identified in the literature as a key leadership action (Tatkenton & Boyett, 1991; Peters, 1997). These actions included promotion of best practice, setting high standards for achievement and modelling exemplary practice.

WOMEN AS LEADERS

A number of authors singled out the leadership style of women for particular mention as being very relevant in today's unpredictable business environment (Parry & Proctor, 1999; Weaver & Sorrell-Jones, 1999; Brody, 2000; DeTrude & Stanfield, 2000; Hackney & Hogard, 2000; Linver, 2000; Lougheed, 2000; Marlow, 2000; Parry, 2000).

Women were seen as generally better at planning, completing, taking positive action and empowering others than male leaders. The transformational approach women exhibited, appeared to fit more easily with a very unpredictable and changeable environment. The highly connective communication style of women was valuable together with, their inclusiveness, empathy, concern for the achievement of others and betterment of community well-being. These characteristics, coupled with their ability to manage a number of tasks at once and their desire to balance work and family/personal life enabled women to cope and flourish in leadership positions. Feminine leadership styles seemed to be more in demand (Parry, 2000), with women more likely to be rated as better leaders by their followers (Parry & Proctor, 1999).

TABLE 5.4 A SYNTHESIS OF THE FINDINGS OF THE CURRENT LITERATURE ON LEADERSHIP

Personal attributes	**Attitudinal**	Conscientious Positive outlook Initiative Reflexivity Adaptability Integrity Resilience
	Intellectual	Emotional intelligence Intellectual stimulation Conceptual skills Analytical ability
Leadership Competencies	**Professional competency**	Work autonomously Develop professional practice Input into clinical governance Influencing and gaining support
	Self management	Seek mentorship Actively manage career Seek feedback Undertake self reflection
	Management competency	Deal with unique problems Manage human resources Well developed communication skills and negotiation skills
Leadership actions	**Focus strategically**	Challenge the process; act rather than react Take time to listen, reflect and plan Communicate the vision
	Inspire and motivate	Transform the performance and motivation of others to higher levels Encourage belief in own and others capabilities Facilitate a positive outlook
	Facilitate change	Manage the environment Stay close to the action Encourage a proactive position Set fairly defined goals to accomplish
	Commitment to excellence	Focus on quality improvement Aim for the best/ to be the best

The above box presents a summary of findings from the analysis of literature on leadership. This was then used as a framework for planning a midwifery leadership development programme.

Development of Clinical Leadership

The rationale for the New Zealand research projects on leadership carried out by Jones et al., (1999) and Parry and Proctor (1999), focused on identifying frameworks for leadership development programmes in this country. The environment for leadership development was considered just as important as the availability of programmes to build on and facilitate skill enhancement.

According to Jones et al., (1999) the transition from clinician to manager was generally made because of particular leadership skills displayed by the clinician. This project discovered that these clinicians generally had no training in management. With reference back to the findings of the review for this paper, management competencies appeared to form an important part of the leadership profile. The report (Jones et al., 1999) identified some key functions that these clinical leaders found problematic in the absence of any formal training or preparation for their role. They included working with and through others, implementing change, team building, gaining an understanding of regulatory requirements and processes, competence in information technology, and human resource management.

By far, one of the greatest challenges for health leaders, particularly those in transition from an exclusively practitioner role, to either clinical leader or manager/leader, seemed to revolve around the need to understand the wider context in which their service was positioned (Jones et al., 1999, Sorrells, Jones & Weaver, 1999; Lanser, 2000; Marlow, 2000). Recognising this issue, the following section focuses on the context of leadership within the health sector in New Zealand, using a complexity theory framework.

The Context of Leadership

Complexity theory can provide a useful conceptual framework for systematically exploring the environment within which leaders are expected to function. Initially the key features of complexity theory as they relate to the organisational context will be summarised, followed by a brief overview of the contemporary midwifery setting in New Zealand (further detail on complexity theory is presented within Part Two of this portfolio).

A Complexity Theory Framework

Taken at its most basic, this theoretical perspective centres on viewing human activities, including the organisations we construct, as products of natural laws.

Humans are viewed as having the same organisational features as the other living organisms with which we share our environment (Byrne,1998; Cilliers, 1998; Campbell-Hunt, 1998); Stonier & Yu, 2000; Dimitrov, 1999). Within this framework, systems, such as organisations of people, are viewed as complex by necessity, with boundaries that are difficult to define because of the degree to which they are constantly interacting and dependent on each other for survival.

Principles I developed from complexity theory enable the nature of systems, such as health organisations and their component parts, such as maternity services, to be explored. The features highlighted in this process can give direction as to the nature of leadership that has the potential to be most effective in this ever-changing world of healthcare delivery.

TABLE 5.5. PRINCIPLES OF COMPLEXITY THEORY

Principles of complexity theory[3]
1. **All systems are interconnected**, are mutually influenced by and have influence on the environment
2. **The descriptions of systems and their elements including individuals and activities are contextually derived** because of the mediating influence of their history, experience and the role of the describer in relation to the system.
3. **There is no correct or incorrect systems model**, as they are never static, or be able to be described as a whole/finite entity and the context will be different.
4. **Constant change is an adaptive mechanism**, vital for survival, the direction being influenced by the system's history and ability to apply this knowledge to the current situation.
5. **Communication fuels and shapes adaptation/evolution.**
6. **The organisations/systems exhibit patterns over time** and within their structure. These patterns can develop into attractors, which reinforce specific behaviour.
7. **Multiple ways of knowing/viewing (perspectives) are normal and vital for survival.**

This framework will now be applied to reflect more specifically on the environment for midwifery leadership within the New Zealand healthcare setting after a decade of profound change (refer to Part One of this portfolio). While identifying the implications of this environment for midwifery leaders, this section also explores the relevance of the key features identified in the previous review of literature on leadership to New Zealand midwifery.

[3] Based on findings in Part Two of this portfolio.

1. All systems are interconnected, are mutually influenced by and have influence on the environment:

New Zealand is a small country with a population of just under four million and about 57,000 births per year (MOH, 2001). The organisational infrastructure is correspondingly smaller and more intimate than many other countries. Due to economies of scale leaders will have multiple roles giving them greater opportunities to network across organisations. The potential influence of individuals is also correspondingly greater, but risks of limited vision and energy can also be greater.

Our small size also has disadvantages that impact directly on our maternity workforce which in turn assures us a connectedness to international maternity systems. Limited clinical practice opportunities for medical specialists requires indigenous obstetricians to gain some of their experience in either Australia or the UK. This limitation has also impacted on the number of midwives that can be produced, causing our maternity services to recruit foreign educated midwives. These connections ensure that our maternity system is constantly being exposed to international influences, with the corresponding risk of devaluing local initiatives and locally educated clinicians. Conversely, it also enriches our system by constantly challenging the status quo through bringing into question our rationale for action, influencing the evolution of our services.

There is also an historic connectedness to nursing that midwifery in New Zealand has which cannot be ignored. Over 96% of registered midwives in New Zealand are also registered nurses (NZHIS, 2001). While the only route to midwifery in New Zealand is now through a Bachelor in Midwifery, most lecturers do not have this qualification and most of the programmes were set up in conjunction with, and in all cases initially sharing resources and papers with, Bachelor of Nursing programmes in nursing departments (Researcher's experience as a midwifery lecturer, 2001). It is only in the last two years that midwives have managed to establish their educational autonomy through the development of separate schools and the evolution of programmes away from their nursing foundations. New Zealand midwifery has a strong history of being politically located within nursing.

The connection of midwifery with medicine has been a contentious one. To achieve parity with doctors in remuneration for maternity services, midwives entered into the same contractual arrangement, Section 51 (HFA, 1996) of the Health and Disability Services Act (1993), as doctors. This proved a double-edged sword. While remaining connected through the service contract, midwives could not be identified as subservient

to doctors, but the more comprehensive role of midwifery care compared with medical care during childbirth could not be more appropriately compensated for. If midwives chose to negotiate a separate contract, they risked loosing out on ensuring that medicine did not impose conditions on midwifery practice without midwifery input (and visa versa).

The reshaping of midwifery's connections with both nursing and medicine in order to obtain and retain its own professional autonomy represents an ongoing midwifery leadership challenge.

2. The descriptions of systems and their elements including individuals and activities are contextually derived because of the mediating influence of their history, experience and the role of the describer in relation to the system.

All players are seen to have a vested interest, which at times and to varying degrees, will conflict with the interests of others. In a small country, this can be both beneficial and problematic. For example, perception of the 'right action to take' will differ because of the contrasting perspectives on a situation. An individual's previous experience will likely have a strong influence on how they react in a situation that appears similar to a previous one, even if the context is different. But in this unique situation, the changed context may adversely influence the outcomes of the actions. Frustration is felt by New Zealanders when overseas experts 'drop in' to our health sector to apply 'miracle cures' that have worked in other contexts without determining if the lessons learnt from elsewhere were relevant here.

This principle calls for a more environmentally aware and collaborative leadership approach. More holistic reflection on past experiences and analysis of personal responses to situations would also aid insight. Consequently the ability of leaders to understand other's positions, and demonstrate the rationale for their actions, will be imperative. Contention and debate over which actions to take should be encouraged and would be healthy for the profession.

3. There is no correct or incorrect systems model, as they are never static, or able to be described as a whole/finite entity and the context will be different.

The concept that health systems and their component maternity systems will be the same, because they operate on identical national funding mechanisms and service specifications would be erroneous, given this principle. The concepts of adaptation to the local environment (context) through evolution, espoused by complexity theory, precludes the existence of identical systems. Application of this principle would also preclude description of correct or incorrect system models without contextualising the

description. The same could also be said for specific leadership models and styles. This principle would support the application of a model or style to suit the context, rather than viewing one model superior to another.

4. Constant change is an adaptive mechanism, vital for survival, the direction being influenced by the system's history and ability to apply this knowledge to the current situation.

This principle implies that stasis inhibits adaptation and change is necessary for survival. A crucial feature appears to be the ability to direct or lead the change in a way that maximises potential for survival. The accessibility of leaders to a variety of information through efficient mechanisms of storage, retrieval and processing, would appear to be vital for this function.

Midwifery in New Zealand has experienced constant change, with bursts of activity at critical phases. For example, legislation in the mid 1980's, forcing the subjugation of midwifery to nursing, appeared to spur midwives into action (Donley, 1998). Their place within the Nurses Organisation became increasingly frustrating, culminating in the formation of the New Zealand College of Midwives (NZCOM) in 1989. The history of this struggle has been kept alive by midwifery personalities and leaders such as Joan Donely and Karen Guilliland, and plays a role in reminding midwives of their need to stay vigilant and adapt to face new challenges (researcher's experience attending NZCOM National Committee meetings).

This process of change challenges power bases and inspires a desire for rebalancing. The impact of the Nurses Amendment Act (1990) on the profession in 1990 led to a frantic phase of change for midwives (Tully, 1999). The increased politicisation of midwives through astute leadership in this country, inspired such activities as a rapid rise in NZCOM membership to include almost all practicing midwives in the country (communication with NZCOM, 2002), the formation of a midwifery provider organisation (along similar lines to medical provider organisations, see Part Seven of this portfolio) which advocates for self-employed midwives, the separation of midwifery schools from nursing and the upcoming Midwifery Council (NZCOM, 2003). These all constitute strategic moves and exemplify proactive leadership to maximise the chance of midwifery's survival and maintain midwives as the prime maternity care providers for women into the twenty first century.

5. Communication fuels and shapes adaptation/evolution.

Closely related to the former principle, the role of communication, cannot be underestimated. Measures employed by leaders to facilitate both incoming and outgoing communication would appear crucial. Ways of interpreting the perception and impact of information, that is the style/techniques used to communicate, should be aimed at achieving a more constructive understanding of situations by those being led. Because of each individual's primary desire to maximises their situation within the system, they have to be persuaded that it is in their best interests to change in a particular direction.

Communication has long been recognised by midwives as a powerful tool. The process of governance of the New Zealand College of Midwives on a consensus model is a good example of leadership in this area. Basically this involves including the views of midwives in each of the College regions in crucial decision-making. The size of the country and the relatively small number of practicing midwives, just over 2000 in 2001 (NZHIS, 2001) supports an open and rapid spread of information among the profession. With the College divided into ten regions, the average volume of midwives per region seems to enable very efficient communication. The physical gathering of midwife representatives from throughout the country quarterly to debate and share issues, aids two-way communication between the College secretariat and the membership. Midwifery leadership is also modelled within this environment.

The regular presence of self-employed midwives in maternity facilities, birthing women, ensures regular two-way communication between employed and self-employed midwives as well as between midwives and doctors.

6. The organisations/systems exhibit patterns over time and within their structure.

These patterns can develop into attractors, which reinforce specific behaviour.

This principle, is of particular interest when focusing on leadership skills. The identification of patterns of, and within organisations, form a vital role in identifying the components of a leadership style most likely to be robust and effective in a rapidly changing organisational environment such as that of the New Zealand maternity service. The ability of leaders to identify and manage attractors in order to strategise resistance or lead pattern shifting, will likely be one of their greatest challenges.

7. Multiple ways of knowing/viewing (perspectives) are normal and vital for survival. Heterogeneity enables contrasting interpretations of situations to be obtained and inventive solutions to problems to responses applied. Stifling criticism and diminishing access to contrasting opinions would be detrimental to survival. By gathering representatives of midwives from around the country quarterly to spend three days together working on strategy and sharing perspectives, midwifery leaders are made more aware of issues from multiple view points. The involvement of consumers in this process balances the professional perspective. The experience of midwifery differs not only by locality, but also by practice setting. The involvement of both hospital-based and community-based midwives in this process is vital in order to obtain a rounded perspective on the profession for strategic planning. Collective opinion is a powerful motivator in directing individual change. The learning opportunities for potential leaders during these experiences cannot be underestimated.

The environment for midwifery leadership in New Zealand today is very volatile and dynamic. In January 2001 a new Maternity Strategy document (HFA, 2000) was released for comment. This document heralded the fragmentation of health funding and strategy to twenty one District Health Boards (DHBs). The need for midwifery leadership has never been greater as midwifery representation will be necessary in all of these locations to ensure the preservation of midwifery practice for women and their babies.

Midwifery Leadership Development Needs

The principles of complexity theory in conjunction with the findings of the literature review will now be used to identify specific abilities and skills required by midwifery leaders to competently and confidently continue development of the profession within the New Zealand health service environment. The needs analysis of clinicians in leadership and management roles carried out by Jones et al., (1999) will be used to validate this process.

Knowledge of the sociopolicical context of midwifery practice and processes to optimise midwifery development.

Midwife leaders need to understand and articulate the 'big picture'. Systems' connectedness, identified by complexity theory, requires knowledge of the New Zealand health system and the positioning of midwifery within its maternity services. The rapidly evolving nature of health systems in this country would also need to be understood. The leadership actions identified in the literature review require leaders to

focus strategically as well as inspire and motivate to facilitate change. Leaders also need to provide direction for these activities, through knowledge of relevant systems.

The ability to analyse the sociopolitical environment and processes relating to the uniqueness of the New Zealand setting, was also supported by the learning needs analysis of New Zealand clinicians commissioned by the Clinical Leaders Association of New Zealand (CLANZ) in 1999 (Jones et al., 1999). Seventy four percent of the clinicians surveyed (nurses, midwives and doctors) identified this as an unmet need. Areas such as government health policies, health economics, epidemiology and the functioning of government, were all identified as forming the basis of essential information for leaders.

The ability to obtain a holistic view of the specific health service or practice, from both the internal and external environments.

The leadership profile identified in the literature review, outlined leadership competencies. Midwifery leaders require a combination of conceptual and analytical skills along with the ability to articulate a viewpoint, particularly within a multidisciplinary environment. The midwife leader will need to obtain information from a variety of sources in order to synthesise and share with colleagues. Good knowledge and understanding, competency, within their own professional discipline will be necessary in order to distil the information for use by the profession.

Professional philosophies and process will also need to be understood. Group facilitation skills will need to be developed in order to negotiate consensus decision-making, a hallmark of New Zealand College of Midwives processes. The process was built around the concepts that other perspectives need to be recognised and accommodated for shared ownership in planning and decision-making (Guilliland, 1998). In the CLANZ survey (Jones et al., 1999), 81% rated development of strategic thinking and planning skills as unmet needs.

The confidence and ability to manage organisational change within the context of both the internal and external environments.

The ability to inspire and motivate as well as facilitate change, was identified as leadership actions within the literature review. The review also identified the need for management competency. Management of people, interests and interfaces rated as the highest unmet need among clinician leaders at 88% (Jones et al., 1999) with the practice of leadership, implementing change, media management and team building the most pressing specific needs. There should be a focus on workforce management

and requirement of team, project-based, assignments in a midwifery leadership programme.

The ability to communicate and envision progress.

The opportunity to demonstrate communication skills through articulating plans and progress, were also capabilities identified for leadership. Both the assignments and seminars in the leadership programme are aligned to encourage group processes and the opportunity for midwives to demonstrate their leadership skills within a learning environment. The group work should also enable midwives to hone their listening skills and work on the practicalities of negotiation in a face-to-face group setting.

Encourage multiple and contrasting voices in decision-making.

The programme should introduce midwives to individuals and groups with contrasting views on midwifery and maternity and health service development. Contrasting views should also be allowed within the group. The environment of the sessions will need to remain safe enough for midwives and guests to articulate their opinions and have constructive discussion. Experience in data retrieval, interpretation and critical analysis would enhance this process.

The CLANZ survey (Jones et al., 1999) found that 82% of clinicians identified team building and group strategy development as an unmet need. Interestingly, only 52% of respondents identified the one way communication forms of public speaking and presentation skills as an unmet need.

Reflection on personal skills and leadership capabilities.

Finally, the opportunity for leaders to experiment with ways of reflecting on their competency and effectiveness should be supported. Identification of their skills and competency level on starting the programme should be offered in order that they can measure their progress during and following completion of the programme. Seventy six percent of respondents to the CLANZ survey, by Jones et al., (1999), identified development of evaluation skills as an unmet need. The skills of personal assessment, reflection and peer review processes were not mentioned in this study as a skill that leaders may require. The NZCOM already used a reflective process for midwives to analyse their professional and clinical competency. Application of this process to the context of midwifery leadership should be initiated and has also been incorporated into teaching and learning processes.

CONCLUSION

The process of reviewing leadership literature enabled the development of an evidence based leadership course for midwives (outline below in Box 5). In order for this course to provide midwives with relevant skills and experience, analysis of the actual environment for midwife leadership in New Zealand also needed to be considered. The leadership profile which emerged out of contemporary management and business literature and research, provided a basis for articulating specific leadership characteristics, that midwife students then could use to analyse their own potential for leadership and formulate personal goals for progress towards enhancement.

Application of the conceptual framework based on complexity theory enabled a holistic representation of the sociopolitical environment and challenges for leaders within midwifery and maternity services, enabling a more specific picture of the actual leadership skills and experience required by midwives who take on leadership roles.

The leadership course subsequently underwent further consultation with midwifery colleagues. A more detailed course was then developed and submitted to the Otago Polytechnic Programmes Committee for approval in May 2001. The first students entered the programme the following July.

TABLE 5.6 THE LEADERSHIP AND CHANGE IN MIDWIFERY PRACTICE COURSE OUTLINE.

COURSE OUTLINE

SEMINAR	THEME	CONTENT	ASSIGNMENTS
SEMINAR 1	**Personal and environmental assessment**	**Leadership models: where do they fit in the health setting:** • Overview and critique of current concepts of leadership, skills and attributes. • Discussion of fitness for application within the NZ health care setting. • Women as leaders: current concepts of roles and attributes. **Scan of maternity environment for receptiveness to leadership development:** • Completion of a scanning tool by individual students to determine then compare their perception of potential for midwifery leadership in the current environment. **Leadership development self analysis:** • Completion of questionnaire to identify areas of potential and the need for further development of personal leadership skills. • Compare findings with those identified in the CLANZ leadership study (1999).	**Assignment 1:** Provide a (confidential) plan for personal leadership development including actions you plan to take to develop these over the semester. (No more than two pages)
SEMINAR 2	**Development of strategic management skills**	**Taking a strategic view:** • Visioning: collective process mapping out a midwifery future in New Zealand – SWOT analysis. • Strategic planning: tools and processes –review of the current Maternity strategy document as a strategic planning tool. • Workforce management. • Processes for managing change within legal and contractual parameters. • Consultation processes. • Negotiation skills workshop.	**Assignment 2:** Provide an overview and critique of the key features of the Maternity Strategy released by the MOH in January 2001 with a particular emphasis on the implications of proposed changes for midwifery development in New Zealand.
SEMINAR 3	**Organisational analysis and planning processes**	**Analysis of a specific organisation**: • Application of tools and processes developed in pervious seminars. • Environmental analysis of organisation. • Identification of strategic development potential. • Create a strategic plan and implementation process (work in groups).	**Assignment 3:** Prepare a proposal including a consultation plan for the (re)development of a midwifery/maternity service. (*Students can work in teams)*
SEMINAR 4	**Development of proposals and change management processes**	**Develop a formal proposal for implementing change (preparation for completion of assignment 2):** • Base on case study from previous seminar. • Develop strategic plan as a proposal. • Develop a plan of consultation.	

References

Antonioni, D. (2000). Leading managing and coaching. *Industrial Management.* (42) Sept/Oct p27:33

Brody, M. (2000). How to be perceived as a leader. *Manage.* (52) Aug/Sept p28-30

Byrne, D.(1998). *Complexity theory and the social sciences: an introduction.* London: Routledge.

Campbell-Hunt, C. (1998). Complexity a theory of everything for strategy and strategising? *New Zealand Strategic Management* Spring p34-38.

Campbell-Hunt, C. (1999). Complexity the implications for strategy and strategists. *New Zealand Strategic Management* Winter p13-23.

Cilliers, P.(1998). *Complexity and postmodernism: understanding complex systems.* London:Routledge.

DeTrude, J., & Stanfield, S. (2000). Successful women leaders: achieving resiliency through rituals and resourch. *Advancing Women in Leadership Journal.* (3) p1 Winter

Dimitrov, V. (1999). *Decision emergence out of complexity and chaos semiotics and complexity.* http://members.tripod/vlad_3_6_7/Decision-Making-in-Complexity.htm.

Dimitrov, V., Hodge, B., Khun, L., & Woog, R. (1999). *Chaos and complexity and Creativity and contemplation* http://www.hawkesbury.uws.edu.au/faculties/socialinq/complexity/chaos.htm

Donley, J. (1998). *New Zealand College of Midwives Journal* Issue 19:18-19

Gilland, A. (1999). A primary opportunity. *Nursing Times.* (95)p14-20 April

Guilliland, K. (1998). *A Demographic profile of independent (self-employed) midwives in New Zealand Aotearoa.* Thesis for Masters of Arts in Midwifery. Victoria University. Wellington New Zealand.

Hackney, C., & Hogard, M. (1999). Women in transition: a mission of service. *Advancing Women in Leadership Journal.* (2) p1 Winter

Health Funding Authority. (1996). *Advice notice issued pursuant to Section 51 of the Health and Disability Act (1993) concerning the provision of maternity services.* NZ Govt.

Health Funding Authority. (1998). *Notice issue pursuant to Section 51 of the Health and Disability Act (1993) concerning the provision of maternity services.* NZ Govt.

Health Funding Authority. (2000). *Maternity services: a reference document.* Ministry of Health NZ (*Embargoed until January 2001)*

Hendry, C. (2003) *Complexity theory: the emergence of a theoretical framework to assist in understanding organisational change within maternity services in New Zealand.* Professional Doctorate Portfolio Part Two.

Jones, S., Boyd, M., & Raymont, A. (1999). *Clinicians in leadership and management roles.* CLANZ Report NZ

Lanser, E. (2000). Lesions from the business bide of health care. *Health Care Executive.* Sept/Oct

Linver, S. (1994). *The leader's edge.* Londan: Simon & Schultser.

Lougheed, J. (2000). Attitude towards women leaders analysed by gender and occupations (1984-1998). *Advancing Women in Leadership Journal.* (3) p1 Winter

Malcolm, L., Wright, L., Barnett, P., & Hendry, C. (2001a). *Clinical leadership and quality in District Health Boards in New Zealand.* NZ MOH Wellington

Malcolm, L., Wright, L., Barnett, P., & Hendry, C. (2001b). *Clinical leadership and quality in primary care organisations.* NZ MOH Wellington

Marlow, L. (2000). *Notes on leadership.* Sydney:UTS Professional Doctorate reader.

MIDIRS. (1999) Clinical Governance in Practice: Achieving Sustainable Quality in Maternity in MIDIRS 9:4 (431-434)

Murphy,E. (1996). *Leadership IQ.* Chester: Wiley & Sons.

New Zealand Health Information Service (2001) New Zealand Health Workforce Statistics, Wellington, NZ. http://www.nzhis.govt.nz/stats/nursestats.html

New Zealand Government (2001) *Health Practitioners Competence Assurance Bill,* Wellington New Zealand.

Nevins, M., & Stumpf, S. (1999). 21st Century leadership: redefining management education. *Strategy and Business* third quarter 41-51

Parry, K., & Proctor, S. (1999). *The New Zealand leadership survey.* Centre for Leadership Studies, Victoria University Wellington NZ

Parry, K. (2000). Take Me to Your Leader. *Management (NZ)* March

Parry, K. (2000). Does Leadership Help the Bottom Line? *Management* (NZ) April

Parry, K. (2000). Women behaving as leaders. *Management* (NZ) June

Parry, K. (2000). Integrity Rules. *Management* (NZ) July

Parry, K. (2000). Hot Housing Managers. *Management* (NZ) August

Peters, T. (1997). *The circle of innovation.* UK: Hodder and Stoughton.

Sorrells-Jones, J., & Weaver, D. (1999). Knowledge workers and knowledge intense Organisations. *Journal of Nurse Administration.* (29) p7-8

Stonier, R., & Yu, X. (2000). Introduction. *Complexity International* (2).

Seligman, M. (2000). The talent wars. *Management* (NZ) October

Smith, P. (1999). Tempting top talent. *Management* (NZ) August

Taffinder, J. (1995). *The New Leaders*. London: Coopers & Lybrand.

Tarkenton, F., & Boyett, J. (1991). *The competitive edge. USA:* Plume.

Tasker, F. (2000). Managing you. *Management* (NZ) February

Tossman, D. (1999). EQ vogue or value. *Management* (NZ) June

Tully, E. (1999). *Doing professionalism 'differently': negotiating midwifery autonomy in Aotearoa/New Zealand.* PHD Thesis, Canterbury University, New Zealand.

Wright, L., Malcolm, L., Barnett, P., & Hendry, C. (2001). *Clinical leadership and clinical governance: a review of developments in New Zealand and internationally*. Unpublished paper commissioned by NZMOH.

Part Six:
CLINICAL GOVERNANCE:
WHAT DOES IT MEAN FOR MIDWIVES IN NEW ZEALAND

CONTEXT

This part of the portfolio was produced as a result of my continued involvement with a multidisciplinary team investigating clinical leadership in the New Zealand health sector (Malcolm, Wright, Barnett and Hendry, 2001a & b; Wright, Malcolm, Barnett and Hendry, 2001). In July 2002, the health sector was about to go through yet another stage in its evolution towards rationalisation and devolution of funding for primary medical care (general practitioner budgets) to the District Health Boards. The broadening of the responsibility of DHBs to include primary as well as secondary health services, prompted a review by this group into the strategies being put into place to ensure clinician input into decision-making, particularly over resource allocation (Malcolm et al., 2001a).

Clinical governance was the term used to rationalise the rapid development of committees and management structures which aimed to give clinicians, predominantly doctors, Board-wide influence in decision-making. During the course of data-gathering for this project, which included travelling the country with a medical colleague interviewing Clinical Directors, Directors of Nursing and Chief Executives of varying publicly-funded health services, the potential impact of clinical governance strategies on midwifery became clearer.

This part of the portfolio explores these issues and gives some suggestions for strategies to mitigate the potential risks for midwifery. The contribution of this paper, lies in looking at New Zealand as a case study from which other country's maternity systems and midwifery can derive and apply their own learning. Coincidentally, part way through developing up this part of the portfolio, Marie O'Connor, an Irish sociologist who I subsequently met at the NZCOM midwifery conference in July 2002, had an article published in MIDIRS on the same subject (O'Connor, 2001). We shared very similar concerns about the potential risks of clinical governance for midwifery. I was able to then incorporate some of her comments in the final draft of this paper.

INTRODUCTION

Clinical governance has been hailed as a system through which healthcare organisations could be held accountable for continuously improving the quality of their services and maintaining high standards of care through the creation of an environment in which clinical excellence flourishes (Scally & Donaldson, 1998). The newness of the clinical governance approach, compared with other 'quality' initiatives, lies in its focus on organisational culture and corporate accountability for clinical quality (Wright et al., 2001). Theoretically and philosophically, this approach is proposed to provide a more integrated and systematic process for achieving clinical quality and minimising risk to the organisation, of adverse events.

Following discussion around the emergence of clinical governance as a concept within health services internationally, this paper will explore the implications of this approach to the management and monitoring of clinical quality as it impacts on health professionals. The potential of these developments on the maintenance of autonomous midwifery practice within an organisational context will then be explored. In an attempt to achieve a constructive approach to the issues, a clinical governance framework will then be applied to review strategies put in place by New Zealand midwives and consumers to achieve and maintain safety and monitor the quality of midwifery care in this country. These strategies are examined as a mechanism for maintaining midwives' professional autonomy over their scope of practice in light of the more generic, centralised and possibly medicalised approach to health care delivery seemingly fostered by the implementation of clinical governance (Wright et al., 2001).

WHY CLINICAL GOVERNANCE?

Internationally there has been a move towards a systems approach to quality improvement in health services. Rather than focus on individual blame, a systems approach places responsibility for safety and quality improvement not just with the individual, but with teams, organisations, national agencies and the government (NZ National Health Committee, 2001). Continuous quality improvement, credentialling, accreditation and clinical auditing (Shortell & Kaluzny, 1994; Walshe & Offen, 2001; Wright et al., 2001), all represent activities presently undertaken within the health sector in varying degrees. This increasing focus on quality has been driven by a number of complex factors such as increasing public knowledge and expectations, rapid technological advances and new patterns of professional education (NZ Ministry of Health, 2001). However, some high profile service scandals seem to have precipitated the most extensive systems reviews leading to the development of more

integrated approaches to achieving quality in health care delivery (Walshe & Offen, 2001) clinical governance being the most recent and arguably the most comprehensive (Wright et al., 2001).

The concept of clinical governance has emerged out of the notion of corporate governance (Wright et al., 2001). Analysis of the meaning and intent of corporate governance provides better understanding of the potential of clinical governance. Corporate governance can best be described as the 'system by which business corporations are directed and controlled' (Organisation for Economic Co-operation and Development, 1999). This includes clarification of the rights, rules and responsibilities of all involved in the organisation, from the board members to managers and 'coal face' workers. This process enables responsibility for achievement of specific corporate goals and outcomes to be identified through articulating lines of responsibility and communication. Progress towards achievement of corporate objectives, which must be aligned with clinical quality indicators, can be monitored and barriers to achievement more easily identified (Shortell & Kaluzny, 1994).

Shortell and Kaluzny (1994) describe governance as setting the vision and values, identifying organisational goals and objectives, taking leadership in policy development and being responsible ultimately for continuous quality improvement. Governance ensures, on behalf of the organisation's owners, that the organisation achieves specific outcomes and avoids what is unacceptable, while management, in this model, becomes responsible for the processes required, to achieve the outcomes. Within this context, clinical governance, can be described as the mechanisms of accountability by clinicians for justification of specific clinical outcomes, and the quality of the processes required to achieve them.

The World Health Organisation, in 1983, identified clinical quality as having four dimensions:

- professional performance (technical quality)
- resource use (efficiency)
- management of risk associated with the service provided
- patient satisfaction with the service provided (WHO, 1983).

Clinical governance is proposed as the mechanism for engaging clinicians in areas of health service delivery which arguably had become over recent decades, the domain of the manager (Walshe & Offen, 2001; Wright et al., 2001). Clinicians have successfully argued, in high profile inquiries into adverse events, such as the 'Bristol

Inquiry' (Walshe & Offen, 2001), that their lack of involvement in decision-making over health care delivery systems and resourcing, precipitated poor quality outcomes (Leape & Berwick, 2000). They argue that it is no longer acceptable to blame the individual clinician who has no control over the work environment.

Clinical governance requires a shift in responsibility for resource decision-making from manager to clinician. A number of issues arise out of this notion including the definition of clinician, the impact on the power dynamics between managers and clinicians and the relationship between medicine and other health professionals in the translation of clinical governance into practice. It also assumes that clinicians will make these decisions, and do so with the larger community good outweighing personal reward. Both notions are at least problematic, when medical practice is privatised and unconstrained by a capped budget.

WHO ARE CLINICIANS?

As a non-doctor in a medical research team investigating the establishment of clinical governance in New Zealand health organisations, my first question was 'Who is a clinician?' Consequently, within the report on the research findings, we described **clinician** as: 'all health professionals including doctors, nurses, midwives, therapists and allied health professionals involved in direct patient care' (Wright et al., 2001). This definition was further expanded to exclude clinicians who had changed roles from clinician to become full-time managers, no longer providing 'hands on' patient care. By limiting the definition to practicing clinicians, it was arguable that Directors of Nursing and full-time Medical Directors could have been excluded. None of the other literature reviewed on clinical governance defined the word clinician. Interestingly, the term clinician seemed to have been used exclusively in the medical literature. The nursing and midwifery literature did not use this term. The dictionary defined the term clinician as: 'an expert in or practitioner of clinical medicine, psychology, etc.' (Collins, 1978).

While the term 'health professions' has become more prevalent recently in literature describing the practicalities of establishing clinical governance (Walshe & Offen, 2001) a search of the internet (June 2002) indicated this term has been co-opted by medicine lately, when it was not its original exclusive definition.

Most of the sites hosting discussion and published papers on the subject of clinical governance were found to be UK medical organisations, UK university medical schools and the British Medical Journal. The literature varied, however, in the level of support

for the concepts of clinical governance. While some medical literature favoured medical involvement in the governance of health services (Roland, 2001; Halligan & Donaldson, 2001; Walshe & Offen, 2001), others remained skeptical, concerned that it was merely a demonstration of increasing centralisation and bureaucracy put in place to 'manage' clinical autonomy (Campbell et al., 2002).

Nurses appear to have been slow to pick up on the issues of clinical governance, with the one nursing site located, run by the UK Nursing Standard, having only three articles available. While some other nursing literature on the subject was located (Martell, 1999; Castledine, 2000; Valentine & Smith, 2000), the majority of easily available, web based literature was written by medical clinicians for a medical audience. MIDRS Midwifery Digest first introduced the topic in 1998 with an article entitled 'Clinical governance: just another buzzword of the '90s?' (Vicars, 1998). Subsequently, the main focus in midwifery articles from the UK on the topic revolved around the processes of clinical audit (Walshe, 2000) and the rationale for involvement of midwives in the process (Carne, 2001; O'Connor, 2001).

Later in this paper, the issues for midwifery of the clinical governance model, will be addressed, drawing on the New Zealand experience of attempting to manage rather than 'suffer' its introduction.

THE CLINICIAN: MANAGER INTERFACE WITHIN A CLINICAL GOVERNANCE MODEL

Implementation of the clinical governance model has the potential to facilitate a strategic shift towards the medicalisation of management. Those in positions of influence over the allocation of resources, whether material or human, maintain powerful positions within an organisation. Responsibility for decision-making over outcomes and the development of guidelines for their achievement, place power with the decision-makers. These responsibilities, over recent years, have generally been the domain of Boards and very senior management. The argument being used by medicine as a response to them increasingly being held accountable for poor outcomes, has been that unless they have economic autonomy, they are unable to achieve safe outcomes. This argument appears to have been instrumental in the shift of power from mangers to medical clinicians that has occurred rapidly since the Bristol Inquiry (Wright et al., 2001). It would appear that within this model, the role of managers in health organisations would be relegated to the complex task of applying

the resource decisions into the outcomes required using the guidelines established by the clinical governance processes.

The Relationship between Medicine and other Health Professionals in the new Environment

In reading of clinical governance implementation strategies, particularly those in the United Kingdom National Health Service (UKNHS), a great deal of responsibility for 'management' or operationalising the strategies in this new environment seems to be placed on nurses (Castledine, 2000; Carne, 2001; Wright et al., 2001). Many of these nurses would no longer fit into the classical definition of 'clinicians', because many nurse-managers have been removed from direct patient contact unlike their medical counterparts 'Clinical Directors'. The make-up of Clinical Governance Boards or Committees at the upper level of the organisations, seems to have a significantly higher representation of doctors to nurses or other health practitioners (Malcolm et al., 2001a). *Further more, the terms midwifery and nursing seem to be used* interchangeably in these settings (O'Connor, 2001; Carne, 2001).

Clinical Governance as an International Movement in Health Care Management and Delivery

Wright et al., (2001) noted an abundance of international health management and medical literature on clinical governance, particularly since the introduction of the concept in the United Kingdom in the late 1990's. The term clinical governance had begun emerging in recent quality focused articles and documents published in the United Kingdom, the United States and more recently Australia and New Zealand. Each of these countries appears to put a different slant on the concept, reflecting the unique nature and configuration of their health care systems and possible lack of clarity over a specific definition.

The United Kingdom Experience

The United Kingdom (UK) appears to be leading the way in this (Malcolm et al., 2001). Clinical governance underpins a national strategy for quality improvement in health care in the National Health Service (NHS) in the UK (NHS, 2002). It is claimed to provide a framework for creating an environment in which 'excellence in clinical care will flourish' (Commission for Health Improvement, 2001 pxiii).

The United Kingdom legislated the implementation of clinical governance through the Health Act (1999) which required a Commission for Health Improvement (CHI) to regularly review progress on its development. Reports of these reviews are available

on the internet (CHI, 2001) and indicate a holistic and generic approach to analysing healthcare delivery. A multifaceted review of service quality is said to include a focus on the patients' experience of clinical effectiveness and outcomes of care, the use of information, resources and processes developed to enable quality improvement and identification of the organisation's strategic capacity (Halligan & Donaldson, 2001).

The NHS modernisation strategy, which provided the framework to support the establishment of clinical governance, appears to have five key components of which include:

- the provision of a national framework for assessing performance with action plans and timeframes through the activities of CHI,
- the setting of national standards supported by evidence based medicine,
- the establishment of a National Institute for Clinical Excellence (NICE),
- the implementation of a comprehensive patient information service to clarify the quality of service they should expect from the NHS,
- a focus on processes to monitor and improve the competency of NHS staff (Wright et al., 2001).

To understand the rationale for the rapid uptake of this concept within the UK, reflection on specific drivers within their health system is necessary. The NHS is a publicly funded, universally available healthcare system (Hancock, 1999). There is a comparatively small private health market, with most medical practitioners employed by the NHS. Full-time employment, places at risk a health professional's autonomy over both their scope of practice and access to resources (Benoit, 1992). This is based on the assumption that position descriptions prescribe the scope of practice and decision-making authority of the employee. Identification of scope of practice boundaries are more likely to create tension between different groups of health professionals within an organisation, when there is no private market available to augment the income and where a hierarchy of staff exists (Benoit, 1992; Blank, 1994).

The fact that clinical governance structures and processes are legislated, galvanises the intent of the UK government to minimise risk to the public (and ultimately the government) of adverse events when receiving care within the NHS. It is also provides a mechanism for rationing resources. The threats these initiatives pose to groups of health care professionals, would be most usefully mitigated by colonising the process and ensuring the maintenance of power over resource decision-making remains within the confines of their particular profession.

Inherent within the UK literature is the notion of 'teamwork', (Roland & Barker, 1999; Donaldson, 2000; Marks & Hunter, 2000; Wright et al., 2001), referring to the concept of a combination of health professionals working together towards a common goal. This is identified in the literature as part of the cultural element that underpins discussion on processes required to facilitate the successful implementation of clinical governance. The team approach fits with a focus on minimising systems failure, but could be looked upon with a sense of nervousness by non-medical health professionals working within these organisations.

The notion of clinical leadership (Wright et al., 2001), also mentioned frequently in the literature as a prerequisite for clinical governance, has the potential to set up the domination of one profession over others. Walshe (2000), reflecting on the lessons gained from the Bristol Inquiry, stressed the importance of strong and effective leadership. The tradition of individual autonomy over practice habits perpetuated by clinical directors who saw their main role as preserving the status quo, appeared to constitute a key barrier to identifying unsafe practice. Walshe (2000) recommended the most effective clinical leaders were those well respected by colleagues with a commitment to quality improvement.

Summarising the literature on the systems and processes implemented within the UK to establish clinical governance, Wright et al., (2001), identified the following as important ingredients:

- professional education, to enable staff to fulfil their roles and understand both the philosophy and mechanisms,
- clinical risk management, to create and maintain safe systems of care,
- clinical audit to monitor and report on progress towards quality outcomes,
- clinical effectiveness and knowledge management through wider implementation of evidence based practice,
- a whole systems approach to quality improvement, a shared development of the vision by all levels of staff.

The effectiveness of 'top down' approaches to clinical governance adopted by the UK NHS have been challenged in the medical literature (Walshe, 2000) and cited by Campbell et al., (2002) as a major cause of physicians' resistance to engage in process.

Quality Initiatives in a Commercially Driven Health System: The United States Experience

While the UK quality initiatives are government led, in the United States of America (USA), they are commercially driven (Wright et al., 2001). The corporatisation of the health care industry has impacted severely on medicine (Robinson, 1999). While the systematic monitoring of quality and service levels has managed to moderately peg back inflation in the costs of health care, there is scepticism over whether these 'savings' represent improvements in the actual quality of health care.

The main quality initiatives in the USA appeared to be focused on containing the activities of the doctor gatekeepers to health service resources. These included:

- management systems to monitor the activities of health professionals,
- case management of high cost patients,
- independent quality review organisations contracted in to carry out evaluations and audits of service provision,
- competition between suppliers of goods and services, e.g. pharmaceutical companies, to come up with the most cost effective treatment for patients,
- clinical practice guidelines, such as clinical pathways, supported (and sometimes developed) by software companies (Wright et al.,2001).

It is difficult to imagine how the UK model of clinical governance could be developed within such a commercially driven environment compared with this tight and market place focused approach to quality.

This market approach to health care delivery has concentrated quality efforts to the level of corporate governance and operational management (Leatherman, Donaldson & Eisenberg, 2000). Business management approaches to quality including total quality management (TQM) and Continuous quality improvement (CQI) have dominated healthcare systems in the USA with processes such as accreditation being the hallmark. A study on the outcomes of CQI in the US health systems by Blumenthal and Kilo (1998) found that administrators not clinicians were the first to incorporate CQI processes into healthcare organisations and that the measures had not demonstrated the improvements expected.

With poor physician support for the business model quality of improvement, nurses in the USA have been increasingly used as the interface between physicians and the administrators to implement quality plans (Mundinger, Kane &. Lenz, 2000). They have

been used to engage in activities which control medicine's access to referred services such as working for contracted review agencies to check the appropriateness of selected treatments by physicians. This pitting of one profession against another effectively sabotages any team concept, keeping clinicians (in the broadest sense of the word) suitably divided for managers and administrators to manipulate in order to meet corporate commercial goals. 'Professionally organised and driven medicine appears to be weak and fragmented with little or no power to counter or influence corporate values and goals other than those which are financial' (Wright et al., 2001p52)

THE EMERGENCE OF CLINICAL GOVERNANCE WITHIN AUSTRALIAN HEALTHCARE ORGANISATIONS.

The impact of state wide strategies for promoting clinical governance seem to have been mitigated by the public:private split in allegiance that medical practitioners have in Australia. Employment of medical clinicians by healthcare organisations is less common (Blank, 1994; Hancock, 1999). The market in Australia works to attract doctors to carry out their private services within the facility provider's hospital. As long as there are choices of hospital to use, there will be competition between facility providers to offer safe and high quality hotel services and nursing care. Doctors are most likely to choose a hospital which most efficiently facilitates their activities and does not call upon them to be involved in day-to-day operational issues. The clinical governance model requires more commitment to the healthcare organisation by the medical clinician in non patient contact time (Campbell et al., 2002; Black, 2002). This reduces the time they have for income generation.

The formation of the National Expert Advisory Committee on Safety and Quality in Australian Health Care (ACSQAHC) and the Consumer Focus Collaboration in 1997 marked a nationally driven attempt to begin working on the redevelopment of Australian health care processes and systems with a focus on the consumers. Following their report in 1999, ACSQAHC was established (www.health.govt.au).

The Consumer Focus Collaboration has established a range of activities aimed at consumer participation, including the National Resource Centre for Consumer Participation in Health, centred at La Trobe University Melbourne. The main aim of the organisation is to involve consumers in evaluation and planning of healthcare services. The potential for marginalisation of a consumer lobby such as this is very real within such a commercial healthcare environment.

Efforts by the ACSQAHC in promoting the clinical governance model at the patient:doctor interface has been very patchy (ARCHI, 2001). The area of risk management appears to have elicited most interest. Application of US models of quality assurance seemed to have attracted a greater following in Australia, for example hospital accreditation. The focus on accreditation fits more comfortably with a commercially driven health service where there is competition between facilities for medical clinicians to access.

THE DEVELOPMENT OF CLINICAL GOVERNANCE IN NEW ZEALAND

A steady flow of discussion documents emerging from government departments over the past 12 months, addressing issues relating to quality improvement within the health sector (Wright et al., 2001; NHC, 2001), indicate that New Zealand health services intend to follow the lead shown by the UK NHS. The actual term clinical governance has only been used in New Zealand since 1999 (Malcolm, Wright & Barnett, 2000). Most literature on the topic at the time focused on activities within Primary Healthcare Organisations (PCOs) (Malcolm & Mays, 1999; Malcolm et al., 2001b).

The funding mechanisms for the New Zealand health sector are similar to the UK model with the hospital services and public health predominantly government funded and universally available to all citizens. The primary care structure is also heavily government funded (Blank, 1994; Hancock, 1999). Maternity services are totally government subsidised, giving midwives and general practitioners equal access to funding under Section 88 of the New Zealand Public Health and Disability Act (2000). There is a small private health market in hospital and diagnostic services. General practitioners are permitted to add co-payments to the General Medical Services (GMS) reimbursement that they receive for visits. However, neither midwives nor GPs are permitted, legally, to charge women for care in childbearing. Currently all general practitioner visits are free (fully subsidised) for children under 6 years of age.

The most comprehensive study to date into clinical governance within the New Zealand Health Service was undertaken in 2001 by Wright, Malcolm, Barnett and Hendry (Wright et al., 2001). This study was commissioned for the Ministry of Health and resulted in the publication of three reports. The first report consisted of a comprehensive literature review on clinical leadership and clinical governance. The other two reports summarised the findings of an investigation into the development of quality initiatives in preparation for the establishment of clinical governance in District

Health Boards (Malcolm et al., 2001a) and in PCOs and Independent Provider Associations (IPAs) (Malcolm et al.,2001b). One of these PCOs was the Midwifery and Maternity Provider Organisation (MMPO) which was set up by the New Zealand College of Midwives (NZCOM) in 1997 to manage a data base and claiming mechanism for self-employed midwife members.

The focus on quality in healthcare delivery in New Zealand has its origins in adverse events which became public scandals (Malcolm & Hendry, 2001), similar to the Bristol Inquiry in the UK. The Gisborne Hospital Inquiry (Health and Disability Commissioner, 1999), which centred on a pathologist incompetently reading cytology specimens over a number of years, appears to have been the catalyst for plans to establishment a better quality health system (Malcolm & Hendry, 2001). In a precursor to the 2001 study on the emergence of clinical governance in New Zealand, Malcolm and Hendry (2001) described a model of the 'clinical quality jigsaw' (2001p17) to represent the apparent state of quality initiatives in New Zealand at the time. This model depicted a fragmented approach, with the professional colleges, registering bodies, Ministry of Health, Accreditation Organisations, the Health and Disability Commissioner, the National Health Committee, auditing and regulatory bodies, Clinical Colleges and the Accident Compensation Corporation all independently focusing on aspects of patient safety, with the clinicians (using the broadest definition) in the middle, with the patient in the centre of this complexity. The challenge seen at the time was to fit together the pieces of the quality jigsaw by constructing a more comprehensive and integrated approach to quality in healthcare (Malcolm & Hendry, 2001).

Within the primary health setting signs of the emergence of clinical governance were evident (Malcolm et al., 2001b) through the development of PCO's governance structures. These organisations formed in response to the commercially competitive environment fostered by health reforms in New Zealand in the mid 1990s. General practitioners formed themselves into these organisations in order to:

- develop more comprehensive services, enhancing their ability to attract service contracts from the Health Authorities of the day,
- reduce the need to become employed by corporate healthcare organisations which were becoming established in response to the competitive environment,
- maintain autonomy over their scope of practice within their geographical location.

While general practitioners could charge co-payments for services, the opportunity to obtain additional funding presented itself along with the potential to generate cost

savings from such ventures. These savings have been claimed to enable the initiation of such quality assurance activities as multidisciplinary staff development including ongoing education and peer review, guidelines for the management of specific diseases, patient-focused service development including complaints procedures and satisfaction surveys (Malcolm et al., 2001a). Some have been able to offer free services and develop sophisticated data bases to monitor activities.

Because these organisations are predominantly doctor owned, there are a predominance of medical practitioners directly involved in corporate governance (author's observations, 2001) blurring the distinction between corporate and clinical governance. While community-owned healthcare organisations had community representation on the Board, medical practitioners were still accorded active control at that level. More recently within medically owned PCOs, nurses and community representatives were in the process of being co-opted onto boards, which at the time of review (2001) were exclusively the domain of doctors.

Similarly, the Midwifery and Maternity Provider Organisation (MMPO) is exclusively 'owned' by one profession, however, the NZCOM commitment to partnership with consumers is represented in the governance structures of the organisation. Their quality initiatives are integrated with those of the NZCOM which also involve consumers. The MMPO was established primarily in response to the Ministry of Health's preference for contracting with practitioner organisations. It remains to the present day, providing self-employed midwives, who choose to join, with a practice management system. This includes a set of women-held maternity notes, a payment mechanism for individual midwives, claiming from the government and an extensive midwifery database which members contribute to in order to receive their annual midwifery care outcomes in preparation for their standards review[1]. This data base is also used to demonstrate the safety of midwifery-led maternity care (discussion with P Dadson, the National manager of the MMPO, 2001).

By collectively developing their business activities around their scope of practice, general practitioners and self-employed midwives in New Zealand have maintained a degree of professional autonomy not possible within the corporatised hospital-based healthcare setting (Malcolm et al., 2001). The impact of market forces on the activities of self-employed practitioners cannot be under estimated. When consumers have a

[1] A peer review process requiring the midwife to present her annual statistics to a panel of consumers and midwives for discussion and reflection.

choice between practitioners in a fee-for-service environment (registration with one practitioner is not a feature in General Practices in New Zealand at the time of writing), the ability to demonstrate safety and optimal service provision outcomes becomes paramount for survival of these groups.

Clinical governance structures within the hospital-based services in New Zealand have been considerably slower to develop then in the primary/community services. The introduction of a further set of health reforms requiring the reconfiguration of the hospital services into District Health Boards (DHBs) in mid 2000, have preoccupied these organisations causing a delay in the establishment of high-level clinical governance initiatives. At the time of the interviews for the clinical governance research project in mid 2001(Malcolm et al., 2001a) many DHBs had a collective of various quality initiatives. Most of these had been implemented in response to requirements for accreditation. Given that accreditation emerged out of a corporate governance model, the lack of involvement in the process by medical clinicians could be understood. Accreditation seemed to be driven by quality managers and nurses seconded to prepare for assessors visits. Clinicians interviewed did not claim accreditation as a clinical quality improvement activity. They saw it more as a process to improve the hospitality side of the service.

Observations made during interviews with DHB representatives by the author for the clinical governance review (Malcolm et al., 2001a) concluded that involvement in governance by nurses was only achieved at service level. Managers who had been nurses were generally present on higher level governance committees leaving nurses to continue their traditionally held responsibility for operationalising quality processes. One of the key barriers to medical clinicians involvement in clinical governance activities, such as membership of implementation committees, was identified as a lack of time caused by pressure of work and loss of income through participation.

In May 2002 the National Health Committee introduced its 'Final report on health care quality improvement in New Zealand'. This report outlined priorities for immediate action. They were; stronger leadership, improved responsiveness to Maori, greater consumer involvement and better co-ordination including multidisciplinary involvement in quality improvement. The National Health Committee has presented this report to the Minister of Health in the first phase towards the development of a legislative requirement to develop a quality improvement strategy for the country's health services. In the meantime, most DHBs and PCOs appear to be second guessing the

strategy and developing their version of a quality strategy through the implementation of clinical governance structures (Malcolm et al., 2001a & b). This approach differs from the top down legislative process adopted by the UK NHS.

THE PLACE OF MIDWIFERY IN CLINICAL GOVERNANCE

As discussed earlier, nursing and midwifery literature is relatively silent on the subject of clinical governance. Bamford and Porter-O'Grady (2000) discuss shared governance which represents a model of clinical governance based on 'self direction, clinical leadership, effective decision-making and strong involvement in the activities of the organisation' (Bamford & Porter-O'Grady, 2000:47). Bamford successfully established this model within a private hospital in New Zealand enabling nurses to take active roles in decision-making at all levels of the organisation. She then transferred this model to a large public hospital which included maternity services in the same city with much more difficulty (communication with A Bamford, Director of Nursing at Capital and Coast DHB, 2001).

Involving nurses in governance roles within a private hospital would seem logical, as they represent the dominant employed profession within an organisation that does not employ doctors. However, a publicly funded hospital with employed medical practitioners would be less likely to welcome such an active governance role for nursing or midwifery. Taking part in interviews for the project reviewing clinical governance, Bamford indicated that she eventually implemented the shared governance model within nursing and midwifery structures, but the system seemed, at the time of interview (2001), to be working in parallel with, rather than integrated within the organisation's high level medically-driven governance model. She also identified particular problems in establishing the model in the women's health service because of the lack of leadership and commitment to the processes among staff, predominantly nurses and midwives. This was exacerbated by midwifery staff shortages.

All the literature found presenting a midwifery perspective on clinical governance seemed to come from the UK and Ireland. The first comprehensive discussion on the topic occurred in the June 2001 edition of MIDIRS where Carne (2001) gave a brief overview of the main principles followed by identification of the key areas likely to impact on the practice of midwifery. Clinical governance was described as a comprehensive integrated approach to quality maternity care claiming to give clinical integrity an equal place to financial integrity. Carne (2001) suggested a strategy for midwifery within this climate was the identification of potential interfaces existing

between current midwifery quality processes and those required by clinical governance. Carne (2001) described the systems required by the clinical governance framework as:

- clinical audit programmes,
- risk management processes,
- application of evidence based practice,
- professional development programmes that meet service needs and re-registering requirements,
- management of clinical performance,
- development of clinical leadership skills,
- management of complaints,
- involvement of consumers in service development.

The risks for midwifery of this model were also explored by Carne (2001). Maternity services in the UK have proved to be a costly area in litigation over clinical negligence. The management of this risk was unlikely to be left to midwives. The potential of this risk averse approach to the provision of maternity care has the potential to seriously threaten the midwife's scope of practice and professional autonomy. The multidisciplinary focus of clinical governance, places the relatively small midwifery workforce at risk of being subject to generic programmes and processes, diluting the essence of midwifery into the more broad role of 'reproductive health worker' (O'Connor, 2001).

Carne (2001) calls for midwives to ensure they are represented on multiprofessional audit and policy development panels, but the shortage of midwives within the NHS make such sacrifices of time away from practice impossible (O'Connor, 2001). This will have profound implications for achieving NHS objectives in maternity care, if midwives are excluded from the process.

O'Connor (2001) provides the most poignant reflection on the potential place of midwifery within the NHS's modernising strategy. She contends that ' as multi-national, state, political and medical control of the profession grows and statutory supervision is seen to be poised to fortify clinical governance, midwives are becoming increasingly disempowered' (2001p457). O'Connor (2001) warns that guidelines and protocols effecting midwifery practice are being developed at higher levels of decision-making where midwives are not involved.

The search engine on the website belonging to the National Institute for Clinical Excellence (NICE) (www.nice.org.uk), the organisation established by the NHS to develop and authorise best practice guidelines and appraise medico-technology and disease management protocols, did not provide any reference to the words midwife or midwives. The word 'maternity' elicited a report by the medical director of a UK hospital (Coakley, 2002) on a review of their clinical governance structures by the Commission for Health Improvement (CHI). In this report the makeup of the review team consisted of a doctor, a nurse, a manager, an other clinical professional, a lay member and a CHI review manager. The review had a 24 week timeframe. While maternity was identified as one of the main areas of interest, the inclusion of medicine and surgery as the other areas resulted in a very generic approach to the process. The only other reference to maternity appeared under a dot point 'still births and neonatal deaths high (clinical practice good)' (Coakley, 2000:19).

The clinical governance responsibilities under the 'Executive Clinical Governance' outlined in the report were identical to those outlined by Carne (2001) above. The aspects examined by the CHI assessment team included:

- the level of consultation and patient involvement in care delivery,
- clinical risk management processes,
- clinical audit,
- research and effectiveness,
- staffing and staff management,
- education, training and development,
- the use of clinical information.

The report placed a heavy emphasis on generic systems and processes.

O'Connor (2001) believes that midwifery in the UK and Ireland is in greater jeopardy today than at any point since the beginning of the last century. She stated that new management structures within the NHS were headed by directors of nursing or chief nursing officers who were expected to give nursing and midwifery strong leadership. O'Connor was concerned that the increasing lack of distinction between nursing and midwifery heralds the disappearance of the profession as an entity with clinical governance enabling the process. Leaving the representation of midwifery to nursing within the clinical governance model effectively disempowers the voice of midwifery.

A further concern expressed by O'Connor (2001) were examples of manipulation of quality outcome measures by the dominant profession who managed to control review processes. Midwives' birth outcomes were amalgamated with obstetricians' outcomes to artificially deflate the intervention rates. Actions like this contribute to the loss of autonomy and the invisibility of midwifery as a separate profession. The alienation of midwifery as a discrete profession is further exacerbated by the fragmentation of care, shift working, the centralised focus of the hospital and the move towards an integrated team-approach to care delivery. A consensus approach to decision-making over guidelines and protocols will always work against midwifery while there is an over representation of nurses and the medical profession on these committees.

THE POTENTIAL IMPACT OF CLINICAL GOVERNANCE ON NEW ZEALAND MIDWIFERY

At the time of writing this paper (2002), clinical governance in New Zealand was in its infancy (Wright et al., 2001) within the health sector. While just over one third of all midwives practicing in New Zealand were self-employed (NZHIS, 2002), the remainder worked within the same settings and structures as nurses and employed medical staff. With the closure of dedicated womens' hospitals and the amalgamation of these services into the tertiary and secondary hospitals, maternity services were more likely to be managed within a cluster of services, such as women's and children's or surgical. This move also seemed to be accompanied by the incorporation of midwifery staff under a Director of Nursing.

In 2002, most main public hospitals in New Zealand had a director of nursing, but none had a director of midwifery (Communication with the NZCOM Midwifery Advisor, 2002). Employed midwives had been increasingly subjected to the development of policies and protocols modelled on those used within other parts of the hospital. The employment of Direct Entry midwives could mitigate the nursification of midwifery in these settings, however, some of these hospitals were still seeking midwives who are also nurses, enabling a flexible workforce.

Self-employed midwives and those working for community trusts appeared to be in a more secure position for this time period because they remained within the primary care setting. All primary care (GP) funding had been devolved to the DHBs, with the exception of Lead Maternity Carer funding for midwives and GPs under Section 88 of the Public Health and Disability Services Act 2000. This funding is expected to be devolved to the DHBs by July 2003, which could then effectively make all midwives

employees of the DHBs (public meeting with the Ministry of Health Maternity Manager, 2002).

With current primary health care funded by the DHBs, analysis of how GPs have managed to maintain professional autonomy in their 'employed' state could be useful for midwives. A Primary Focus Conference attended by the author and facilitated by the Ministry of Health in May 2002, consisted of a series of workshops where a variety of PCOs presented their progress towards transition into Primary Healthcare Organisations (PHOs). The PHOs model is defined by the Ministry of Health (2002) as 'local structures through which DHBs will implement the primary health strategy' (MOH, 2002:1). DHBs may contract the service provision to one or a number of PHOs who will provide service directly by employing staff, or through its provider members.

Presentations at the Conference by existing docto- led and managed PCOs, indicated their expectation that they would be able to convert into a PHO by placing nurses and consumers on their board and demonstrate their ability to meet the government's health targets. Many of the PCO presenters identified their clinical governance structures in a similar way to those developed within the NHS, presumably second guessing the Ministry of Health's Quality Plan which is yet to be published. The review of progress DHB's were making in establishing clinical governance structures around hospital services (Malcolm et al., 2001a) also indicated a close alignment with structures developed in the UK.

THE INTERFACE BETWEEN MIDWIFERY QUALITY INITIATIVES AND CLINICAL GOVERNANCE IN NEW ZEALAND MIDWIFERY

In 2001, there were just over 2000 practicing midwives in New Zealand, including about 300 direct entry midwives (NZHIS, 2001). Half of all these midwives were providing continuity of care as Lead Maternity Carers (LMCs). LMCs manage the childbearing episode of care for the woman including antenatal care, conduction of the labour and birth and the postnatal care up to 6 weeks post delivery. They also decide with the woman if referral to a medical consultant is necessary (MOH, 2002). The majority of LMC midwives are self-employed, but increasingly hospitals and rural trusts were employing midwives to act in these roles (NZCOM, 2002). Midwives working within base obstetric hospitals predominantly work under the control of either a service manager/clinical director dyad or a Director of Nursing. The integration of maternity services with other hospital services was progressing with the two largest obstetric

hospitals in the country planned to move on site with general hospital tertiary services over the next two years.

Over the previous 12 years, during which midwives have been able to practice without supervision from a doctor or nurse, self-employed midwives have formed into various types of practices. As with the GP groups, some of the midwives formed into larger provider organisations, mostly with doctors, to contract directly with the government for service provision, rather than claiming in the fee-for-service modular format.

Concerned by the fact that midwives had no option but to join medically-run organisations to gain the commercial advantages, the NZCOM formed the Midwifery and Maternity Provider Organisation (MMPO) exclusively for midwife members of the NZCOM. Currently a third of all self-employed midwives are members of the MMPO and increasingly, community health trusts are using the MMPO services for their midwives. The organisation has developed along similar line to the PCOs and is progressively establishing itself as a potential means of preserving midwifery autonomy within the climate of clinical governance.

The NZCOM has a comprehensive quality assurance process for both self-employed and employed midwives supported by the Midwives Handbook for Practice (2002). The framework presented by Carne (2001) will now be used to examine the quality improvement and monitoring activities developed by New Zealand midwives, to identify their fit with the principles of clinical governance.

Clinical Audit

Clinical audit is described by NICE (www.nice.org.uk, 2002) as the monitoring of particular interventions, or the care received by patients against agreed standards. The NZCOM has developed a Midwifery Standards Review process which is co-ordinated by midwives in conjunction with consumers to evaluate the quality of care by midwives practicing in continuity according to nationally-derived midwifery standards of practice (Barlow, 2001). This process has been in place for the last 10 years and a requirement to take part in such a process has now been incorporated in the 2002 Section 88 Maternity Services Notice (NZ Public Health and Disability Act 2001).

Risk-Management Processes

A number of risk-management processes have been established by the NZCOM. These include the establishment of :

- the Complaints Resolution Committee. This has seen a dramatic downturn of complaints to the Health and Disability Commissioner,
- the Standards Review process which enables midwives to monitor and manage their own practice to increase safety for the woman,
- evidence-based clinical practice guidelines and consensus statements,
- a Midwifery Advisor position to mitigate and manage clinical practice disputes,
- representation on a variety of maternity advisory bodies to ensure midwives are well informed,
- employment of a midwife lawyer to advise midwives and the profession, reducing litigious risk.

Application of Evidence Based Practice

NZCOM has developed evidence based consensus statements and practice guidelines for midwives on various aspects of practice. These are made available on the NZCOM website www.nzcom.org.nz . The College employs a Midwifery Advisor whose role it is to facilitate consultation over the development of these documents and update them. They are regularly being added to as the clinical need arises.

Professional Development Programmes that meet Service needs and Re-Registering Requirements

Within the NZCOM framework for competency assurance (Pairman & Guilliland, 2001), a five step process is articulated for both employed and self-employed midwives. The first is the verification of qualifications and experience to practice, the second centres on correctly defining the midwifery scope of practice (midwives should not be expected to practice outside their scope for safety reasons). The third step involves ongoing monitoring of the practice by the means identified under management of performance, and the fourth requires identification of professional development needs, then returning to step three for monitoring of practice.

The clarification of these processes, which have been developed, tested and refined by the NZCOM over a number of years, enables employers and facility managers to work their way through existing credentialling processes for midwives without having to develop them independently.

Management of Clinical Performance

Barlow (2002) notes in her evaluation of the Standards Review process, that 'participants identified aspects of the Review that encouraged reflection and changes in practice' (2001:14). The presentation of a midwife's outcomes-of-care statistics and

written feedback from consumers directly to the panel of consumers and midwives creates a powerful tool for management of clinical performance.

The Complaints Resolution process also provides another avenue for performance management as does the role of the Midwifery Advisor who is in the unique independent position of being able to facilitate processes for the management of clinical performance issues (discussion with N Campbell, NZCOM Midwifery Advisor, 2002).

Development of Clinical Leadership Skills

The governance processes adopted by the NZCOM including the 'live in' quarterly National Committee meetings that promote the leadership skills of practicing midwives who represent their regions at this level. These midwives who have been nominated Chairperson of their region are joined by other midwifery leaders to set the strategic direction of the College and the profession. These are the midwives who take back consensus statements and practice guidelines to their colleagues for discussion and ratification. These midwife leaders also expect their colleagues to take leadership roles locally through promoting professional development activities including clinical practice workshops and represent midwives in maternity related consultation.

Self-employed midwives, who form about 50% of the midwifery workforce, work within collective practice arrangements which requires a degree of leadership to manage and continue to develop over time. These midwives are small business managers and contribute much to the education and support of newly registered midwives.

Management of Complaints

Complaints Resolution Committees have been established by the NZCOM in consultation with the Health and Disability Commissioner and consumers. These committees are located regionally and are available to women and midwives. They consist of a consumer and midwife partnership, who work through issues with the woman and/or midwife at the first level of a complaint.

Involvement of Consumers in Service Development

Since its inception, the NZCOM has had a close partnership with consumers who are also represented within its membership. Consumers are present in all aspects of the quality assurance processes. These consumers are not isolated and 'captive' of the profession, but mostly representatives of other consumer organisations with which the NZCOM works closely.

THE NEW ZEALAND COLLEGE OF MIDWIVES AS AN EXAMPLE OF CLINICAL GOVERNANCE IN ACTION

The process of analysing New Zealand midwifery quality assurance initiatives using the clinical governance framework (Carne, 2001), clarifies the pivotal role played by the NZCOM. The College has the potential to provide a unifying process for midwifery as a profession in face of the emergence of clinical governance within DHBs and primary health care. The processes developed and enacted by midwives and consumers nationally need to be articulated to the broader health services. Plans are currently underway to inform both maternity health services at DHB level and simultaneously DHB planning and funding managers in order that midwifery LMC services could remain intact, valuing the national focus the College has on the maintenance of quality assurance activities.

The role of the MMPO as an advocate for self-employed midwives will also become critical within the devolved DHB environment where midwives are particularly at risk of being absorbed into large PHOs. Through management of the midwifery database nationally, and control over midwifery payment mechanisms, the MMPO also has a role as a unifying body for self-employed midwives. The governance of the MMPO by NZCOM members should secure credibility and strength for the organisation as other maternity provider organisations disappear under the pressure of local PHOs.

CONCLUSION

The lessons from the clinical governance experience in the UK for New Zealand midwifery lie in the need to continue development of strategies that bring autonomous practitioners into standard setting and maintenance for the profession, that meet the emerging requirements of quality assurance in a climate where clinical governance is taking hold within health care structures. This will include membership on strategic committees, monitoring and input into clinical governance processes as they potentially impact on midwifery, and maintenance of a series of early warning systems through national networking. The College National Committee structure fulfils this function effectively.

The need to educate health service providers on the role of the College and the MMPO also support this strategy. The careful use of language and redefining our 'taken for granted' processes in a way that makes sense to bureaucrats and other clinicians, may stave off the impact of institutional clinical governance that threatens midwifery in the UK and prevent this in New Zealand.

REFERENCES

Agency for Health Care Research and Quality. (1998) *The challenge and potential for assuring quality healthcare for all for the 21st century.* http://www.ahrq.govt accessed June 2001

Bamford, A., & Porter-O'Grady, T. (2000). Shared governance within the market orientated health care system of New Zealand. International Nursing Review (47) p83-88

Barlow, A. (2001). Evaluation of educational aspects of the New Zealand College of Midwives standards review process. *New Zealand College of Midwives Journal* (24)

Benoit, C. (1992). Midwives in comparative perspective: professionalism in small Organisations. *Current Research in Occupations and Professions.* (7) p203-220

Black, N. (1998). Clinical Governance: fine words or action?. *British Medical Journal* (316) p297-298

Blank, R. (1994). *New Zealand health policy: a comparative study. UK:* Oxford University Press.

Blumenthal, D., & Kilo, C. (1998.) A report on quality improvement. *Millbank Quarterly* 76 (4) 625-648

Campbell, S., Sheaff, R., Sibbald, B., Marshall, M., Pickard, S., Gask, L., Halliwell, S., Rogers, A., & Roland, M. (2002) Implementing clinical governance in English primary care group/trusts: reconciling quality improvement and quality assurance. *Quality and Safety in Health Care.* (11) p9-14

Campbell, S., Roland, M., & Wilkin, D. (2001). Improving the quality of care through clinical governance. *British Medical Journal* (322) p1580-1582

Castledine, G. (2000). Clinical Governance: opportunities for nurses? *British Journal of Nursing.* May-June

Carne, V. (2001). Clinical governance: complimentary or just complicated? *MIDRS Midwifery Digest.* (11:2) p168-171

Coakley, J. (2002). *Being reviewed by CHI: A first hand experience.* www.nice.org.uk accessed June 2002

Collins Dictionary (1978) Harper Collins, USA

Commission for health improvement (2001) *Report on Clinical Governance Review at Ipswich Hospital* NHS Trust London.

Donaldson, L. (2000). *Clinical Governance a Quality Concept in Clinical governance in primary care.* http://www.primarycareonline.uk.co/quality/clinicalgovernance

Hancock, L. (1999). *Health Policy in the Market State.* NSW: Allen & Unwin.

Halligan, A., & Donaldson, L (2001). Implementing clinical governance:turning vision

into reality. *British Medical Journal* 322 1413-1417

Health Funding Authority. (1996). *Notice issued pursuant to Section 51 of the Health and Disability Act (1993) concerning the provision of maternity services.* Wellington. New Zealand

Health Funding Authority. (1998) *Advice notice issued pursuant to Section 51 of the Health and Disability Act (1993) concerning the provision of maternity services.* Wellington. New Zealand

Leape, L., & Berwick, D. (2000). Safe health care: are we up to it? *British Medical Journal.* (320) 18:3: p725-726

Leatherman, S., Donaldson, L., & Eisenberg, J. (2000). International collaboration. *Quality in Health Care* (9) p43-145

Malcolm, L., & Hendry, C. (2001). Clinical leadership and clinical governance: a key piece of the quality jigsaw. *Health Manager* (8:2) p15-19

Malcolm, L., & Mays, N. (1999) New Zealand's independent practitioner organisations. *British Medical Journal* (319) p1340-1342

Malcolm, L., & Barnett, P. (1994) New Zealand's health providers in an emerging market. *Health Policy* 29 85-90

Malcolm, L., Wright, L., & Barnett, P. (2000). Emerging clinical governance: developments in clinical governance in independent practitioner organisations in New Zealand. *New Zealand Medical Journal* (113) 1103 p33-35

Malcolm, L., Wright, L., Barnett, P., & Hendry, C. (2001a) *Clinical leadership and quality in District Health Boards in New Zealand.* NZ MOH Wellington

Malcolm, L., Wright, L., Barnett, P., & Hendry, C. (2001b) *Clinical leadership and quality in Primary Care Organisations* NZ MOH Wellington

Marks, L., & Hunter, D. (2000). *From PCGs to PCTs – work in progress. London:* NHS Alliance.

Martell, R. (1999). Nursing uniquely placed to lead clinical governance. *Nursing Standard* (14) p7-8

Ministry of Health. (2002*). Report on Maternity 2000 & 2001.* Wellington, New Zealand

Mundinger, M., Kane, R., & Lenz, E. (2000). Primary Care outcomes in patient treated by nurse practitioners or physicians. *Journal of the American Medical Association* 283 (1) 59-68

National Health Service. (1998). NHS Modernising agency – clinical governance http://www.demo3.health-media.net/scripts/default.asp?site_id=18&id=4007

New Zealand College of Midwives. (2002). *Midwives handbook for practice.* NZCOM Christchurch

New Zealand Health Information Service. (2002). Nursing and midwifery employment

statistics. http://www.nzhis.govt.nz/stats/nursestats.html.

New Zealand Ministry of Health. (2001). *Adverse events in New Zealand public hospitals: principle findings from a national survey*. Wellington, NZ.

New Zealand Ministry of Health. (2001). *Discussion paper: quality improvement strategy for public hospitals.* Wellington, NZ.

New Zealand Ministry of Health. (2002). *Notice Pursuant to section 88 of the New Zealand Public Health and Disability Act 2000* . NZ Govt.

New Zealand National Health Committee (2001) *Safe systems supporting safe care.* Wellington, NZ

O'Connor, M. (2001). 'Good girls' or autonomous professionals? Part II: Ruling by consensus: statuatory supervision and midwifery governance. *MIDIRS MidwiferyDigest* (11:4) p457-462

Pairman, S., & Guilliland, K. (2001). Midwifery standards review: a strategy for Cridentialling. *New Zealand College of Midwives Journal* (25) p23-28

Robinson, J. (1999). The corporate practice of medicine. Competition and innovation in healthcare. *California/Millbank series on health and the public.* London:University of California Press.

Roland, M. (2001). Choosing effective strategies for quality improvement. *Quality in Health Care* (10) p66-67

Roland, M., & Barker, P. (1999). *Clinical governance: a guide for primary care Teams.* National Primary research and Development Centre, University of Manchester www.nprdc.man.ac.uk

Roland, M., & Hunter, P. (1999). *Clinical governance: a guide for primary care teams* National Primary Research and Development Centre University of Manchester http://www.nprdc.man.ac.uk

Scally, G., & Donaldson, L. (1998). Clinical governance and the drive for quality improvement in the new NHS in England. *British Medical Journal.* (317) p61-5

Shortell, S., & Kaluzny,A. (1994). *Healthcare management:organisation design and behaviour* 3rd edition. New York : Delmar Publishers

Valentine, F., & Smith, F. (2000). Clinical governance in acute childrens' services. *Paediatric Nursing.* Harrow on the Hill October.

Viccars, A. (1998). Clinical governance: just another buzzword of the '90s? *MIDIRS Midwifery Digest* (8:4) p409-412

Walshe, K (2000) Systems for clinical governance:evidence of effectiveness. *Journal of Clinical Governance (8)* p174-180

Walshe, K., & Offen, N. (2001). A very public failure: lessons for quality improvement

in healthcare organisations from the Bristol Royal Infirmary. *Quality in Health Care* (10) p250-256

World Health Organisation. (1983). *The principles of quality assurance.* Copenhagen.

Walshe, K. (2000). *Clinical governance a review of the evidence Birmingham.* UK: New York Health Service management Centre, University of Birmingham.

World Health Organisation (1983). *The principles of quality assurance* Report on a WHO meeting. Copenhagen.

Wright, L., Malcolm, L., Barnett, P., & Hendry, C. (2001). *Clinical leadership and clinical governance: a review of developments in New Zealand and internationally*. Unpublished paper commissioned by NZMOH.

Part Seven:
UNFINISHED BUSINESS:
STRATEGIES FOR FUTURE PROOFING MIDWIFERY IN AOTEAROA/NEW ZEALAND

CONTEXT

The results of findings from the contextual scan of the rural maternity services (Part Four of this portfolio) and networking achieved carrying out this project, demonstrated to me the fragile nature of maternity services as constructed by midwives within rural settings over the previous decade. Using a sample of rural midwifery services, the scan highlighted some major weaknesses in the way services were being managed. Individual midwives, particularly LMC midwives, had focused to such a degree on the individual woman's needs, that contact with collective women's groups had been allowed to slip. Meaning advocacy from the constituency of women was declining and concern for the collective good of the profession had also taken a lower priority. An understanding of the rationale for particular directions and actions taken by the profession in response to environmental changes at certain points in the past was becoming lost. The institutional memory of the profession had been eroded over time.

Self-employment required a focus on personal and collegial business and service development. This meant that services in the facilities had become stagnant, lacking cohesion and leadership, making institutional-based midwifery roles unattractive to energetic entrepreneurial midwives. Most of the midwives with good leadership skills and experience had become self-employed, hence the grip of nursing over the activities of employed midwives had remained because of the lack of commitment to the development and nurturing of employed midwives' managerial and leadership skills.

The major gains made by midwives in the country included the monopoly by midwives of LMC service provision to women in almost all regions in the country. Midwives had become recognised throughout the country as the main/preferred providers of maternity care to individual women. By 2001 (MOH, 2003) only 27% of childbearing women had a doctor as their LMC. This placed self-employed midwives in a powerful position to negotiate with funders for service provision because they provided the majority of LMC services.

Doctors, because of a preoccupation with their own struggles in a regionally devolved health service environment, had increasingly withdrawn from provision of maternity services. This was exacerbated by the fact that they were prohibited from providing LMC services during the labour and birth, without paying for the services of a midwife, thus reducing the amount they could earn for this most valuable module by about 50%. Given that midwives could earn the entire module on their own, a shortage of midwives to 'assist' GPs had occurred in most areas (Guilliland, 1999; conversation with NZCOM N. Campbell, midwifery advisor, 2001).

Most LMC midwives were self-employed which enabled them to develop their services unencumbered by nursing or medicine, with most developing their community services away from facilities, less encumbered by the vagaries of hospital policies. The focus on the activities and developmental needs of the LMC midwife had eclipsed the situation of midwives who had remained in employment, staffing the hospitals where self-employed midwives relied on them to provide care for their birthing women.

Just as the midwifery profession, and self employed midwives in particular, seemed to be in a comforTable position, in 2001, the devolution policy of the recently re-elected Labour government swung into action[1]. In July 2002, the maternity facility and obstetric services budgets were handed down from the Ministry of Health to the 21 District Health Boards (DHBs), which were very hospital focused. In July 2003, the Section 88 payments for the LMC services were planned to be devolve to the DHBs. This was a frightening prospect for self-employed midwives as they would then be reliant on their DHBs for funding the service (refer to figure 1), rather than have the budget nationally managed. If the DHBs decided to develop an employment relationship with these midwives, instead of the fee-for-case arrangement as currently, their autonomy to practice could be threatened.

Employment places a tension between the professional/clinical responsibilities of a clinician and their obligations as an employee. Doctors have been fighting this for years (Malcolm & Mays, 1999). Currently midwives use their clinical judgment over a number of practice decisions, for example, where to provide care, in the home or the hospital, how many visits to provide, case-load volumes, practice configurations, collegial back-up arrangements, type and condition of equipment, and place of birthing. The concern

[1] The New Zealand Health Strategy (2000) promoted regionally managed services on a population based funding formula. This meant that all funding, including Section 88, would sit within each of the 21 DHBs.

over the prospect of employment centred on the loss of control over clinical decision-making in their the work environment and their ability to be creative in meeting the unique needs of women.

At the time of writing this paper, GPs were fighting the same battle with the government over the devolution of their funding for primary health services to the DHBs, which occurred in July 2002. The subtle difference between the situation of the GPs and the midwives lay in the doctors' ability to charge uncapped co-payments for services, whereas midwives are not permitted to do this. Midwives are reliant solely on the publicly funded Section 88 payments for their livelihood (HFA, 2000).

It was within this environment and concerns that the College of Midwives commissioned me to work with the NZCOM Secretariat to strengthening the services provided to support midwives. Part of this role included the development of a quality plan for the College, which was then presented to the Ministry of Health as a funding proposal aligned with the New Zealand Health Strategy. The College was successful with their proposal and secured funding for three years to build up and strengthen the College infrastructure to support the quality assurance activities.

Following the project reviewing the College 'structure', I was asked to work with the Midwifery and Maternity Provider Organisation (MMPO) to determine how prepared the organisation was to take on a more active role in supporting self-employed midwives within the increasingly regionalised and fragmented health service. The organisation needed to develop a higher national profile. At the time (early 2001) the MMPO was predominantly a South Island midwifery provider organisation.

Following completion of a project focusing on redevelopment strategies, I was invited by the MMPO Board, to take on the role of as Executive Director of the organisation. The main function of this new part-time role was to progress the strategies proposed within their strategic plan (MMPO, 2001) including streamlining the organization's processes, improving staffing levels, increasing midwife membership nationally and working towards achieving the potential to manage the Section 88 budget nationally for the profession.

This section provides an overview of these activities as they relate to the previous sections of this portfolio, and flags new risks on the horizon for the profession in this country, demonstrating the complexities of maternity service provision. The complexity

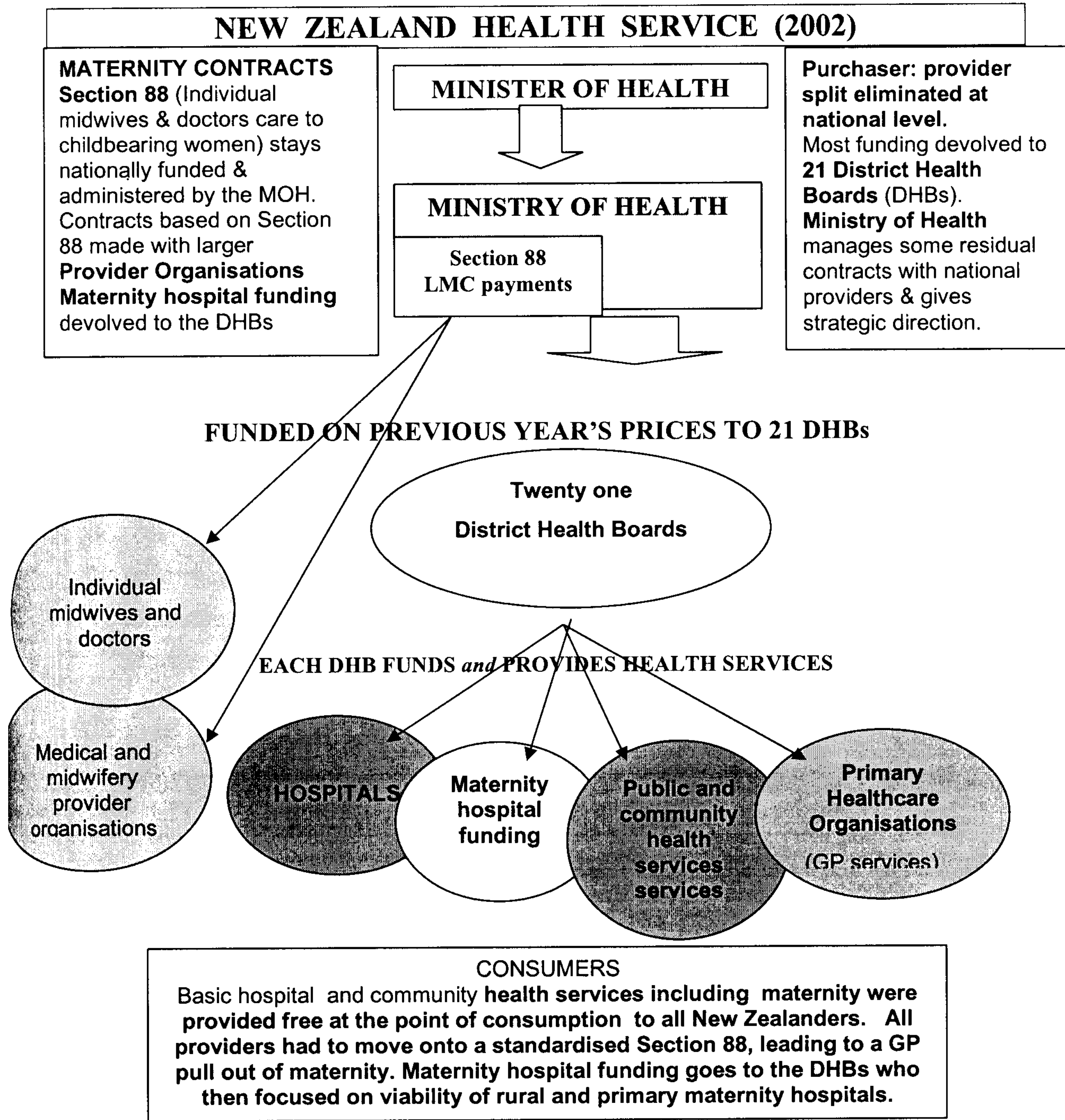
theory framework is used to synthesise the work of the doctorate and provide philosophical direction for the future, enabling the usefulness and applicability of the complexity theory principles to be gauged, as they relate to the organisation of maternity services by midwives within the contemporary New Zealand health environment.

INTRODUCTION

New Zealand is a small country with a population just under 4 million and a sTable annual birth rate, at about 56,000 births per year (MOH, 2003). We have a health system that is publicly funded and universally available to all citizens. Maternity services are provided free of charge to women. As demonstrated in the previous sections of this portfolio, however, maternity services have undergone a transformation since midwives in New Zealand gained the right to practice independently from medical practitioners in 1990. This transformation reflects political and policy volatility, that while creating opportunity for midwifery, was also not without risk.

Figure 7.1 (below), illustrates the configuration of health services in the country at the time of writing this part of the portfolio in late 2002. Note that the budget for LMC services was held nationally, even though the budget for maternity hospital services had been devolved to the 21 District Health Boards in July 2002. (refer to the definitions and abbreviations section of this portfolio for descriptions of the various levels of maternity facility services).

Figure 7.1. Health services in New Zealand in 2002: sources of maternity funding.



THE NEW ZEALAND HEALTH SYSTEM: REGIONALISING AGAIN

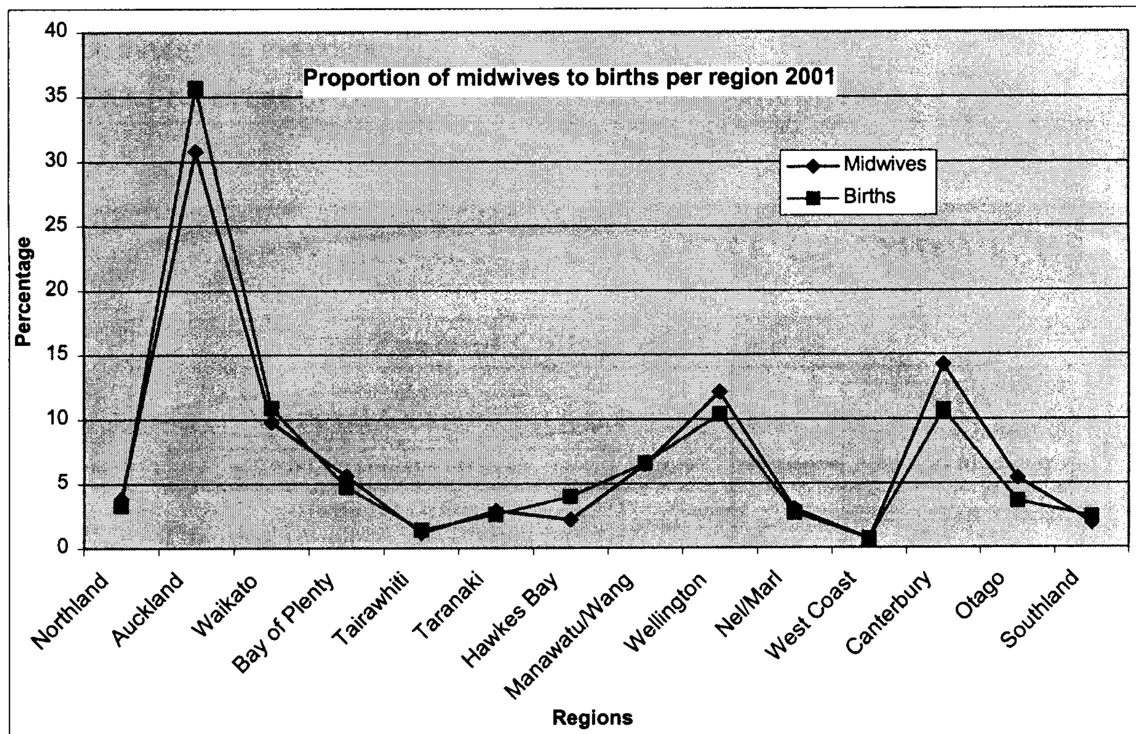
The funder;provider split has been devolved to regional level. District Health Boards were then charged with managing funds for all public health services in their catchment area. The DHBs had developed out of the hospital services and retained a strong hospital focus. Maternity Section 88, mental health and disability services remained nationally funded directly by the Ministry of Health. Necessary health services including maternity, still remained free of charge.

THE MIDWIFERY CULTURE IN NEW ZEALAND

There were just over 2000 midwives practicing in New Zealand in 2001 (NZHIS, 2002). The majority (85%) were members of the New Zealand College of Midwives (communication with NZCOM, 2002). Almost half of the practicing midwives took on the role of Lead Maternity Carer (LMC), providing continuity of care for a specific caseload of local women. Most of these LMC midwives were self-employed (communication with NZCOM, 2002), with a full-time caseload of 50-80 women per year (National Manager of the MMPO, 2002). These midwives provided at least some of the care in the woman's home, with postnatal home visiting compulsory, according to the Section 88 service specifications.

Figure 7.2 below, illustrates the distribution of all practicing midwives throughout the country in relation to actual births for the same year. This distribution was self-regulated. In the existing market model, with most of the self-employed LMC midwives providing LMC services, access to a sufficient caseload to make a livelihood would generally determine the place of residence for the midwife.

FIGURE 7.2 THE WORKFORCE DISTRIBUTION OF MIDWIVES PER REGION IN NEW ZEALAND IN 2001

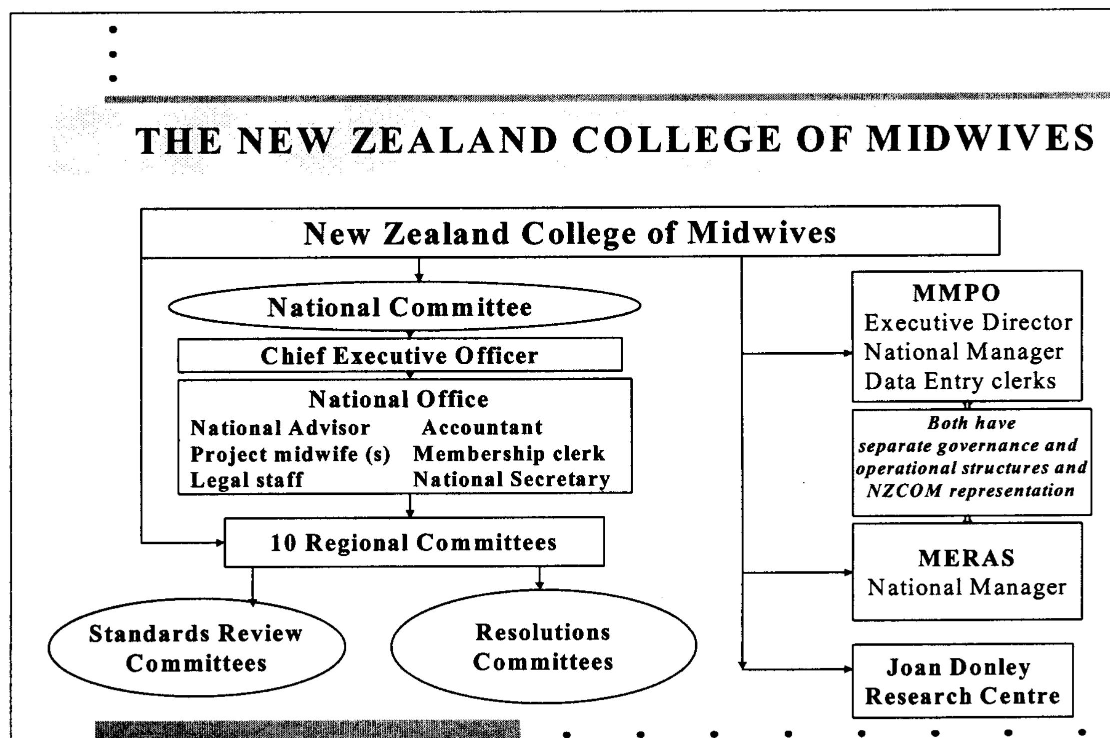


Sources: NZHIS Nursing Council Registration data (2002)
MOH Report on Maternity 2000-2001(2002)

The New Zealand College of Midwives (NZCOM) provides a number of essential services for self-employed midwives, most importantly, the negotiation of the Section 88 service specifications and the funding attached to it. The College also provides these midwives with indemnity insurance, legal advice, clinical practice advice and a number of quality assurance processes that are outlined in Part Six of this portfolio. It seems to be these features that ensure a high rate of membership among these midwives.

Figure 7.3 (below) provides a schematic overview of the structure of NZCOM. The secretariat provides the operational functions of the College, which are directed by the outcomes of quarterly three-day National Committee meetings. The Chief Executive Officer of the College and the National Advisor, are in daily contact with midwives nationally, as well as maintaining a liaison role with the Ministry of Health, District Health Boards, Nursing Council, educational institutions, health consumer groups and other bodies which have the potential to influence and impact on the profession of midwifery and provision of maternity care. The further development of the College over 2002 included the formation of the Midwifery Employee Representation and Advisory Service (MERAS), effectively a union for employed midwives, and the Joan Donely Research Centre, developed to encourage, support and make available midwifery research throughout the country.

FIGURE 7.3. STRUCTURE OF THE NEW ZEALAND COLLEGE OF MIDWIVES



This final part of the portfolio, inspired by the research findings presented in Part Four, investigating the development of maternity services by midwives in rural settings, explores developments by the profession to consolidate and maintain midwifery autonomy, challenged by the threat to devolve LMC midwifery funding to 21 District Health Boards. The response to this challenge will be explored through examination of the MMPO's role in supporting and guiding the developing of LMC midwifery services since its inception in 1997. This organisation was revitalised by the profession in 2001, to enable LMC midwifery services to evolve and adapt in a way that maximises their likelihood of survival within a continuously changing maternity service environment.

The Maintenance of LMC Funding For Midwives

A key strategy identified by midwives in New Zealand as pivotal to their continued autonomy as practitioners, was the maintenance of budget-holding by an individual midwife for the entire episode of care for a childbearing woman (Guilliland, 1998; NZCOM, 2002). A fee-for-case model was seen as the ideal. Such a model was at the time enshrined in Section 88, which effectively enabled midwives to be self-employed and regulate their income by determining their own productivity and throughput. It was also reasoned by midwives, that the same autonomy could be achieved through budget holding by a designated organisation for a volume of cases (NZCOM, 2002). Such an organisation, the MMPO, had been set up the NZCOM in 1997.

When the Regional Health Authorities restructured maternity services in early/mid 1990s, there was a move towards contracting with provider groups rather then individual providers. The Section 51 Maternity Notice (HFA,1996) (later to convert to Section 88 (MOH, 2000) was initially negotiated between the NZCOM, the New Zealand Medical Association and the Health Funding Authority in 1994 to be accessible only to individual practitioners on completion of components of maternity service for individual women. The growing number of midwives accessing the Notice (Pairman, 1998; Tulley, 1999), placed pressure on the payment authority, Health Benefits. A solution was to encourage maternity providers to group together and manage a negotiated bulk payment based on predicted birth volumes, but maintaining the intent of Section 51 as the basis for payment to the individual practitioner.

In response, a number of organisations rapidly appeared. These organisations, mostly doctor led, managed to negotiate sizable sums over and above the total that would have been obtained through individual application to Section 88, on the basis of needing to cover administration and transaction costs (Guilliland, 1998). While the

contracts were expected to be based on Section 51, a number of providers managed to negotiate individual variations to the standard notice, mostly for the convenience of practitioners who did not want to complete documentation required with a modular payment system. This was later to cause a problem with data capture because the modular payment system had compulsory data fields within the payment claim forms (Communication with MOH, 2002).

This move towards the development of provider organizations pressured the NZCOM at the time into developing a structure enabling midwives to collectively negotiate midwifery service contracts with the HFAs. NZCOM, a non-commercial not-for-profit incorporated society, found it necessary to establish an alternative structure to take on the contracting and budget holding role as a commercial venture, the Midwifery and Maternity Provider Organisation (MMPO) was formed in 1997.

THE DEVELOPMENT OF A MIDWIFERY PROVIDER ORGANISATION

The prime reason for setting up the MMPO centred on pressure from the HFA to negotiate organisation-based contracts for maternity service provision. With the concurrent development of medical provider organizations, which were at the time referred to as Independent Practitioner Associations (IPAs), there was a need to have an organisation that offered the option of a midwifery model of maternity care to women. The formation of the MMPO, was viewed by the College as giving self-employed midwives, women and consumers the opportunity to develop a quality midwifery service based on the principles espoused by NZCOM under the umbrella of a provider organization (MMPO, 1997).

There had also been ongoing difficulties for midwives providing midwifery services for doctor LMCs. The development of a midwifery IPA was anticipated to enable negotiation with interface providers, such as hospitals and doctors, to identify optimal models of maternity care for women. The critical mass of self-employed midwives was insufficient to give a voice to midwifery within IPAs at their local level (MMPO, 2000).

The Organisation was set up following a feasibility study sponsored by the College. Following acceptance of the concept by the National Committee of the College, a National Manager was employed who had an accounting and health background. The National Manager, with support from the Board and the College, set up the operational structure of the MMPO and negotiated a contract with the Southern Regional Health Authority in 1997.

THE STRUCTURE OF THE MMPO

In creating such an organization, the professional role of the NZCOM needed to be distanced from the commercial role of the MMPO, yet together maintain a partnership in professional development. The MMPO was registered as a chariTable Limited Liability Company with seven directors as shareholders. Commercial advice at the time suggested this entity would be safest. The governance functions of the organisation were carried out by a Board consisting of seven members; the CEO of the College of Midwives, two consumer representatives, one Maori representative and three midwife members who were elected from their regions (MMPO meeting Minutes and Rules of the Organisation, 1997).

The operational part of the MMPO consisted initially of a general manager and data entry staff. In 2001, this was expanded to include an Executive Director and more data entry staff to cope with the increasing volume of claims and statistics being processed.

The Organizations Key Objectives

The stated mission of the MMPO (The certificate of Incorporation, 1997) was to provide a supportive practice management infrastructure, quality assurance systems and business framework for self-employed midwives. The main objective being to enable self-employed midwives to practice autonomously, without reliance on being managed by other service providers, and focus on providing continuity of care for women in Aoteoroa, New Zealand.

The following formed the key objectives of the organisation as they were laid out in the document of incorporation (MMPO, 1997).

1) To ensure midwives continue to have an environment where they can provide maternity care to women within the midwifery model of care.
2) To negotiate with maternity service purchasers for service contracts which enable midwives to provide high quality, women-focused maternity care.
3) To support the development of midwifery services throughout the country, particularly for Maori, rural women and those choosing a home birth.
4) To negotiate and manage payment for maternity services to midwives and associated maternity providers.
5) To collect relevant maternity outcome data to ensure that women choosing midwifery-led maternity care achieve high quality outcomes.
6) To ensure that all midwife members take part in quality assurance activities and are members of their nationally recognised professional body, the NZCOM.

7) To support the professional role of the NZCOM to position, develop and service the profession of midwifery in New Zealand.

8) To provide educational and clinical practice information to midwives, women, consumers, NZCOM, health service providers and Ministry of Health (MMPO, 1997p3).

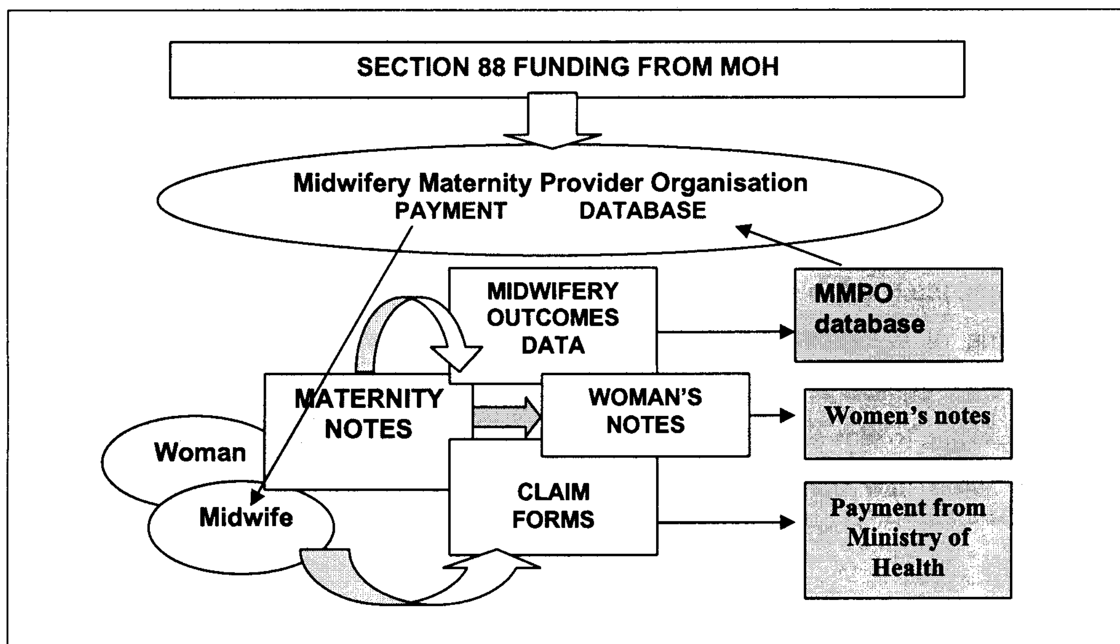
Membership of the MMPO

Membership grew slowly over the first few years. There was no charge for midwives to join, but they had to be NZCOM members and agree to undergo College quality assurance processes, including a regular midwifery standards review[2].

The Organisation developed a set of Maternity Notes, which fulfilled three discrete functions:

- they provided a framework in which the midwife documented care given and decisions made,
- each woman received a carbon copy of the notes,
- these notes included claiming and data-entry forms that enabled payment and outcome statistics to be tracked.

FIGURE 7.4. THE MMPO DATA CAPTURE AND PAYMENT CLAIMING PROCESS.



[2] This review process was developed by NZCOM for midwives to reflect on their practice against the NZCOM midwifery standards. This includes a formal presentation of practice and outcomes to a panel of peers and consumers.

Figure 7.4 above illustrates the flow of information and payment for midwifery services, that the MMPO had developed over the previous five years.

The process was as follows:

1. At the first assessment in early pregnancy (the booking visit), the midwife and woman complete the first module of information which includes a registration form which officially enrols the woman into the care of that specific LMC midwife. Particular components of information from this visit, including demographic and health history data is completed and sent to the MMPO. The maternity notes are completed in triplicate, to include a set for the midwife, one for the woman and one to be sent to the MMPO. The midwife uses the same set of notes for the woman's entire care (up to six weeks following the birth). She submits in total eight pages (potentially 450 fields of data) for the entire pregnancy, labour, birth and postnatal period (MMPO Maternity Notes, 2002) to the MMPO for processing.

2. At the MMPO, data entry staff include this information[3] into a database which also calculates the midwife's payment for the module of care and forwards this information to both the government payment body and the MMPO payment system. Once a fortnight, the money owed tothe LMC midwife for care, is deposited in her bank account. The MMPO is paid by the Ministry of Health on a monthly estimated cost with 'washups' (over or under payments rectified) every 6 months.

3. The midwifery database is then used by both the College of Midwives and by individual midwifery practitioners. The practitioners use the database for their annual standards review process, where they are expected to present the outcomes of their care over the previous 12 months. The College uses the non-identifiable data to investigate topical issues, support the role of midwives in the provision of maternity care and to compare outcomes with other provider groups (Discussion with P. Dadson, National Manger, 2002).

For the first four years of the organisation's existence, the membership grew slowly to about fifty South Island self-employed midwives. Over this time, the knowledge and

[3] The data fields, including midwifery care outcome measures, were developed in consultation with practitioners over four years. The initial database evolved from a Masters project (Guilliland,1998).

experience of the manager in the logistics of community-based midwifery service provision became valued by the Ministry of Health, as a source of advice. Midwives, particularly through setting up in self-employment, and maternity service providers, valued the organisation for its networking abilities and overview gained through dealing with midwives over a number of localities. The ability of the organisation to recruit North Island midwives, who constituted about 80% of the workforce, into the organisation proved more difficult.

In the absence of a midwifery provider organisation in the North Island, midwives there had joined with medical provider organisations, who were able to offer midwives greater remuneration for services, through their success at negotiating budget holding for Section 88 (1996). Most of these provider organisations only operated in one region, enabling a more 'personalised' service to the midwives. They were available to provide a more comprehensive administrative service locally to midwives, similar to that provided for doctors, than a national organisation sited in a distant location could.

These organisations also had midwives on their boards and seemed to encourage a close collaborative relationship between the doctors (most of whom were obstetricians) and their midwife members. It was difficult for the MMPO to compete for membership among these midwives in this environment. North Island membership seemed to come initially from midwives who were not affiliated with any provider organisation and were grateful for the support and networking offered by the MMPO (Discussion with P. Dadson, National Manager, 2002). Most of these midwives came from rural and regional towns.

Sources of Revenue for the Service

Initially, the Organisation was only able to negotiate a contract with the Southern HFA, which covered the South Island. Midwife membership was restricted to this area until 2001. This contract enabled the MMPO to be paid in bulk for an estimated annual volume of first trimester pregnancy visits and for the estimated cost of ultrasound scans for midwives' women over a 12 month period. Because the benchmark for the volumes was based predominantly on doctor LMC volumes, the MMPO created sufficient savings out of this income to maintain the organisation, with its services free to midwife members, and build up a reserve.

By mid 2001, the health service environment was changing and the MMPO was seen by self-employed midwives as an increasingly safer option for them. At the time of

completing this portfolio, over half of all self-employed members of the College of Midwives were active members (300 LMC midwives). There were a number of factors that precipitated this rapid increase in membership.

CHANGING MATERNITY SERVICE FUNDING ARRANGEMENTS

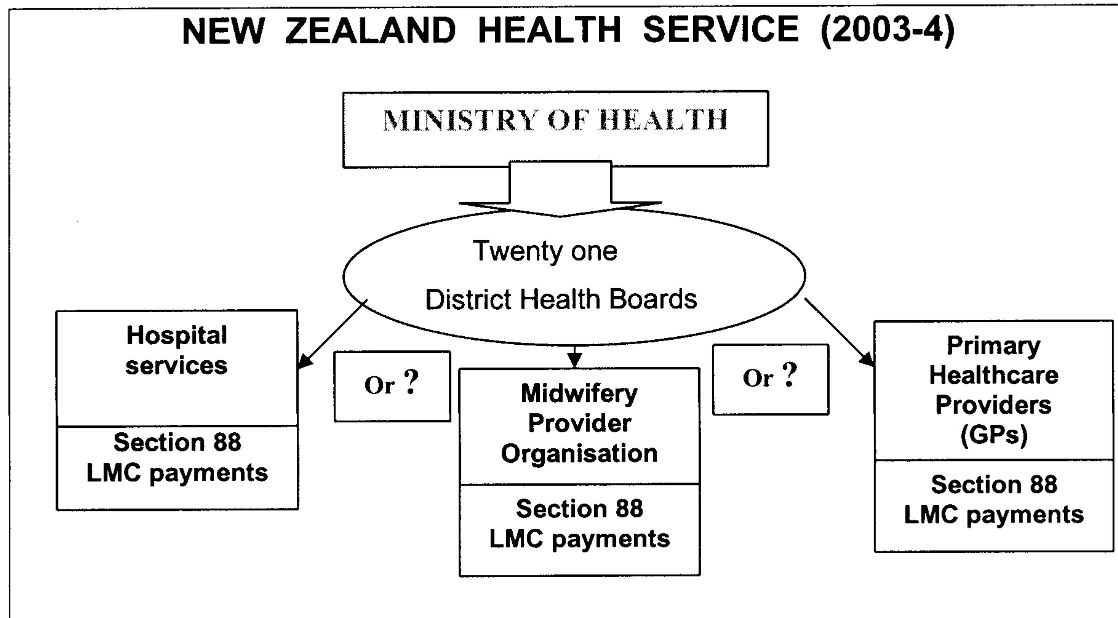
Communications from the MOH in mid 2000 indicated that two key shifts in funding for LMCs were to occur. Firstly there was to be standardisation of maternity provider contracts onto Section 88 of the New Zealand Public Health and Disability Act (2000) by mid 2001 (NZCOM, 2002). This would effectively eliminate any advantages provider organisations would have over an individual claiming from Section 88 (2000). It was estimated that some doctor-led organisations stood to loose up to $400 per case. This heralded a decision by many doctors to cease provision of maternity care, leaving midwife members of the provider organisation the only ones claiming of Section 88. There was less incentive to service Section 88 providers to the extent they had been in the past, particularly as increased effort was required to cope with negotiations with DHBs over the devolved GP funding.

Fortunately, this change represented little difference to the income MMPO midwives received per case, as they were on the same payment schedule as Section 88. It did mean, though, that the budget holding that had been negotiated for first trimester visits and ultrasounds, would cease. Over the years, the MMPO had saved sufficiently on this to maintain the functioning of the organisation without members needing to pay for services. This change in circumstances, could mean they would have to charge midwives for services.

The second change, involved the planned devolution of the Section 88 (2000) budgets to the 21 District Health Boards (refer to Figure 4 below) in July 2003. The potential of this move caused great concern among self-employed midwives, particularly those providing LMC services over a number of DHB boundaries. The key concern here was that effectively, with the DHB holding the budget, it was probable that they either the maternity hospital or the PHOs (GP groups) would be delegated to manage it. Rather than maintaining the fee-for-case arrangement as exists with the current Section 88, these midwives were concerned that the budget holders would attempt to make savings by employing midwives thus having control over their scope and location of practice (discussion with self-employed midwives in the course of my role with the MMPO). Management of employed LMC midwives had been unsuccessful in most DHBs, because midwives seemed to prefer autonomy over both location, volume of

cases and configuration of their practice (Discussion with N. Campbell, NZCOM Midwifery Advisor, 2002).

FIGURE 7.5. HEALTH SERVICES IN NEW ZEALAND IN 2002: POSSIBLE SECTION 88 BUDGET HOLDING.



MEETING THE CHALLENGE: DEVELOPING THE POTENTIAL OF THE MMPO WITHIN A DEVOLVED HEALTH SERVICE ENVIRONMENT

It was within an environment of serious concern about the continuation of 'independent' midwifery in New Zealand, that the functions of the MMPO were put under scrutiny by the College of Midwives. With the New Zealand health system restructured into 21 DHBs, responsible for the purchase of health services for their district, the MMPO was well positioned through its partnership with the NZCOM to continue its prime functions at both a national and regional levels. With restructuring, involving the addition of an Executive Director, whose role was to link the governance and operational functions of the organisation, the MMPO was positioned to develop alongside primary health organisations, providing services and advice both to them and directly to DHBs.

These activities were contingent upon the MMPO reaching a funding agreement with the Ministry of Health and/or the NZCOM. A budget holding arrangement was arrived at which continued to provide the MMPO with a source of revenue. Two sources of income were secured. NZCOM contracted the MMPO to provide regular midwifery outcome and workforce data, and the Ministry of Health agreed to a budget holding arrangement for Section 88 payments to members until the planned devolution in July 2003.

In keeping with the increase in strategic importance of the MMPO to the maintenance of autonomous midwifery, the MMPO Board agreed to the development of some key strategies which would enable the organisation's continuing evolvement to keep pace with the changing health service environment (MMPO Strategic Plan, 2001). These strategies were presented within the organisation's strategic plan, within five categories:

⇒ Development of the organisational infrastructure.
⇒ Improve communications and support professional development.
⇒ Engage in midwifery workforce planning and maintenance.
⇒ Enable and support the College of Midwives' quality assurance activities.
⇒ Develop the MMPO as a national structure.

Under each of these strategies, the following activities were systematically undertaken through 2001 and 2002. They were:

Development of the Organisational Infrastructure

In early 2001, the MMPO had about fifty active members and two staff; the national manager and a part-time data-entry operator (Discussion with P. Dadson, National Manager, 2002). Given that there were an estimated 650-700 self-employed LMC midwives in the country (Discussion with NZCOM midwifery advisor), there was significant potential for growth. At the time, there were only three major maternity providers who had midwives in their organisation and they were located within three major cities. They had an estimated 200 midwives between them. Non-affiliated self-employed midwives were making it clear that they wanted to join the organisation set up by the College (discussion with colleagues in NZCOM).

The infrastructure of the MMPO in early 2001, was not considered robust enough to manage a large increase in membership. The electronic database did not have the capability to increase in size and volume and there were not sufficient staff to increase the level of service. The MMPO Board agreed to the following actions in order to improve the efficiency of service development, maintenance and monitoring activities of the organisation:

- development of an Executive Director role, to foster strategic development of the organisation and support the National Manager to implement operational changes,
- employment of more data entry and advisory staff,
- improvement in administrative activities,

- increasing visits by the Manager and Executive Director to midwife members around the country supporting the development and maintenance of LMC midwifery services as a preferred provider status, particularly through support of self-employed midwives, and those in rural and remote locations.

Potential growth in the organisation and the national focus of the service required some fundamental changes to the organisation's secretariat. With an increase in staff, internal communications and procedural guidelines also needed to be developed and processes formalised. The complexity of managing a national provider organisation with a potential membership of 500-700 from one site, particularly within a regionalised health service environment, would require a robust and efficient administrative centre.

Improve Communications and Support Professional Development

The MMPO needed to make more visible its role within the maternity service setting at a national level, after being known primarily as a South Island maternity provider organisation. Midwives in the North Island and upper parts of the South were not aware of the entire breadth of its functions, particularly its role in providing advice and support for self-employed midwives and small, mainly rural, maternity providers. There had been a significant amount of work undertaken by the MMPO, which seemed to act as times in an advocacy role, similar to a union, at the request of members, which was known only to individual service users. The MMPO also sponsored and kept midwives informed of ongoing professional development activities and clinical updates. The MMPO needed to set up processes for communicating at a national level regularly.

As health service development generally took on a more regional focus, the need to have formal contacts with specific midwife members in the regions also became apparent. The local networks and knowledge these midwives had of maternity services in their region would be invaluable for negotiation with District Health Boards over further development of midwifery LMC services. The profile of LMC midwives also needed to be increased in light of new DHB staff and the potential for local management of the Section 88 budget.

Actions undertaken to effect better communication both internally and externally included:

- the National Manager and Executive Director visited various regions to meet midwives and recruit more members and a regular newsletter was developed,
- a brochure on the service was produced,

- a website was developed (link through www.midwife.org.nz),
- a bi-monthly newsletter was produced for members,
- a regular column also given to the MMPO in the national NZCOM 'Midwifery News',
- information packages were developed and given to each new member and those inquiring about membership.

Engage in Workforce Planning and Maintenance

The MMPO needed to demonstrate its value to the MOH, NZCOM, midwives and DHBs, as the only national midwifery LMC provider organisation in the country. Other income streams needed to be developed to support the growth of the organisation. But firstly, the organisation needed to have something to offer. The expertise, information and anonymised midwifery outcome data generated out of the activities of the organisation placed it in a unique position to provide:

- midwifery workforce planning data,
- assistance with recruitment and retention of midwives, particularly in rural areas,
- advice on service logistics and service reviews,
- non-identifiable midwifery outcome data,
- business management systems for maternity contract holders.

It was envisaged that both NZCOM and the Ministry would support the maintenance of an organisation capable of providing a national overview and enabling national networking of a small, widely distributed health workforce. Eventually, the NZCOM agreed to a three year contract with the MMPO to provide these services for use by the College.

Enable and Support the College of Midwives in their Quality Assurance Activities

In line with published health service frameworks, such a the New Zealand Health Strategy (2000) and the New Zealand Primary Health Strategy (2001), the expectation of quality assurance processes informing and guiding health service provision was made explicit. NZCOM had recently (2001) obtained a contract with the MOH to further develop and maintain quality systems for the profession. The MMPO seemed well positioned to support NZCOM in this role through its maintenance and reporting on midwifery care outcomes. A number of activities were undertaken by the MMPO to strengthen their role in this area, including:

- transitioning to a more efficient electronic claiming system to provide more efficient disbursement of payment to midwife members, thus attracting more members and more midwifery outcome data,

- promoting nationally the use of the MMPO set of maternity notes, even among hospital-employed midwifery LMC providers, in order to contribute to more comprehensive monitoring and benchmarking of midwifery and maternity service outcomes for midwives and women,
- monitoring and management of service component utilisation, including scans, pharmacy and laboratory services.

To formalise this relationship with NZCOM, the two organisations entered into a contractual arrangement. This arrangement also mitigated the potential for the MMPO to develop a purely commercial focus in its activities and recognised the role of NZCOM as the appropriate body to develop and manage quality assurance activities for midwives. The provider organisation enabled the process.

Maintain the MMPO as a National Structure

There seemed to be some logic in the maintenance of a national midwifery provider organisation in this country with such a regionalised health service. This is particularly so when the workforce is relatively small, with around 2220 practitioners nationally (NZHIS, 2001). An estimated 1000 of these midwives practiced continuity of care (NZHIS, 2001). In 2001 about 70% of all pregnant women in New Zealand choose to have a midwife as their LMC, (MOH 2002).

Midwives have a discrete scope of practice, different to that of any other health professionals. Many midwives practice in relative isolation to other disciplines, particularly in rural settings. This is not by choice, but a demographic reality. A critical mass of midwifery knowledge and experience will be required by the newly developing Primary Healthcare Organisations in the formation, development and ongoing monitoring of their maternity service activities. The efficient and accurate management and monitoring of midwifery-specific quality systems would require a critical mass of midwifery practitioners, greater than those currently working at any regional level in the country.

This country does not have an official national midwifery data set. The first national maternity outcomes data was produced in this country in 2001 (MOH, 2001) on data from 1999. Most of the information came from hospital discharges, therefore, excluding home births. The MMPO had developed the only nationally available, and the most comprehensive midwifery LMC outcome data set. The more midwives contributing to the data set, the more representative the information would be at a

national level. Reliance on regional provider based data, would not enable a fair representation of midwifery outcomes, because of the low volumes of LMC midwifery practitioners in some regions. For example, one South Island DHBs has two LMC midwives, while another has only one full-time and a part-time back-up midwife.

By contributing to a national database, these particular midwives' outcomes could be accurately benchmarked against LMC midwives in any other part of the country, rather than just against their local medical LMCs. The work these midwives undertook would also be made visible. In both the above examples, the midwife LMCs had home birth rates in excess of 40% (Conversations with these midwives, 2002). They were the only home birth providers in their region and their outcomes were not captured in hospital discharge data. Added to this, is the problem of low birth volumes in some of the DHBs which are insufficient to give power to some of the rates examined, e.g. the volume of still births, breeches, water births, consultations and transfers of care to specialist services (MOH, 2001).

The MMPO formed an integral part of future-proofing strategies implemented and developed by the midwifery profession in this country, in response to the potential challenge to their autonomy presented by the threat to devolve LMC funding to the vagaries of 21 cash-strapped District Health Boards.

Analysis of these Strategies from a Complexity Theory Perspective

In this final section of the professional doctorate portfolio, I would like to reflect on the principles of complexity theory and examine their usefulness as a tool for guidance in the development of future proofing strategies for the organisation of maternity services by midwives and women in New Zealand. As a result of this process, some amalgamation of the principles, developed in Part Two of the portfolio, took place. The original principles developed are presented below in Table 7.1.

TABLE 7.1. THE PRINCIPLES OF COMPLEXITY THEORY (HENDRY, 2001:17)

PRINCIPLES OF COMPLEXITY THEORY
1. All living systems are interconnected.
2. Description of systems and their elements (individuals and activities) are contextually derived.
3. There is no correct or incorrect systems model as they are never static.
4. Constant change is an adaptive mechanism, vital for survival.
5. Communication fuels and shapes adaptation/evolution.
6. Organisations/systems exhibit patterns over time and within their structure.
7. Multiple ways of knowing/viewing (perspectives) are normal and vital for survival.

THE INTERCONNECTEDNESS OF SYSTEMS

Midwifery in New Zealand has been influenced not just by the sociopolitical changes that have occurred over the past 10 years as demonstrated in Part One of the portfolio, but also by the interpretation given to these directives within the local community and health service environment. A clear message that seemed to have come out of the analysis carried out as part of this doctorate, was the need for midwives to constantly monitor the 'big picture'. Midwives are unlikely to hold back the tide of change brought about through the adaptation of health services to government-directed regionalisation. Midwives need to adapt as well. This particular principle, would advocate a collaborative approach in adaptation, supporting the collective action of midwives.

Because of the small size and sparseness of the workforce throughout the country, the decision by individuals to join local health provider organisations, would likely lead to the dissipation of midwifery as a collective and discrete 'system' of health service providers. The strategy of the College to set up a union for employed midwives and strengthen the MMPO, formed part of a conscious strategy to make the profession as a whole more resilient in the face of a devolved health system.

This principle seems inextricably linked to others. In order to identify txe strengths and potential influences of closely aligned systems, communication, choice of action based on analysis of previously successful strategies, and the acceptance of change as inevitable, all represent vital actions.

Services, including the individual providers, are profoundly influenced by the context of their practice. Communication plays a vital part in fuelling and shaping adaptation/evolution, within and between contexts.

Amalgamation of the second and third complexity theory principles seemed more appropriate as a result of this analysis. The initial principle advocated the value and importance of knowledge and opinions from multiple positions. This would require a sophisticated level of communication that operates in a flat, rather then a hierarchical sense. The value of local knowledge should not be underestimated, and means to acquire this should be maintained. At a national level, thematic analysis of the multiple views would give direction in prioritising action.

Such activities as regular travelling by national office holders to the various region, regular means of communication collectively between the regions and mechanisms for service consumers to give input, would all contribute to a multidimensional picture of the maternity service context. Activities outlined in Part Six, such as the standards review activities and complaints resolution processes also contribute to this picture, as long as there is a way of communicating trends identified in these processes, at a national level. The capture of data by the MMPO on midwifery outcomes, by individual, region and nationally, contribute another dimension to this picture.

The message gained from analysis of this principle within the maternity service context, would also require an acceptance that a midwifery perspective and a medical or nursing one, will always be different, because of the positioning and experience of the viewers. Identification of any common, shared views and understandings would therefore more likely be the best starting point for negotiation.

Because of the constantly evolving nature of health services, no one model will suit all contexts. There would have to be a marriage of both.

This principle implies that there is no such thing as the perfect model of a system. What works in one setting may not work the same in another. This was illustrated in the research on rural services, where in some settings, employed LMCs worked quite successfully as the dominant model of midwifery care, while in others this was a disaster (Guilliland, 1999). The influence on the environment, such as competition from other LMCs, the organisational capabilities of the midwives and the wellbeing of the maternity facility services, all appeared to have an effect on the health and sustainability of the service as a whole.

The usefulness of the scanning approach to data-gathering is also supported by this principle. Regular overviews of services would enable benchmarking to be carried out and signs of maladaptive behaviour identified for further investigation. Such monitoring

would also contribute to the 'big picture' required at a national level for strategic decision-making. The variances evident in practice patterns gained through analysis of midwifery outcomes would also contribute to the picture.

Change is an adaptive response, necessary for survival. The direction of this change is reliant on the ability of the organisation to apply/translate past knowledge and experience to the current situation.

The attempt to maintain a system or organisation in the same form, because in the past it has been successful, given this principle, would lead to organisational dysfunction in a constantly changing external environment. The challenge arises in decision-making over adaptive strategies. Clearly communication would play an important part in this. The more midwives are involved in activities which interface with maternity services and take part in interdisciplinary networking, the more comprehensive the information obtained for this decision-making should be.

Over recent years, midwives have become involved in politics, research projects, boards of companies and management of health services, while still maintaining a functional relationship with the College and their colleagues. This networking has been a two-way process for midwifery. The visibility of the profession has been raised and the impression of the profession by external 'systems' has also been able to be gauged. Planning for specific networking workshops, with groups of midwifery researchers, educators and policy makers, enables this information to be shared.

Organisations/systems exhibit patterns over time and within their structure which reinforce specific behaviours.

Such activities as the review of the organisation of the College and of the MMPO, and the recruitment of other midwives and consumers into the organisations, would have been sufficient to destabilise attractors. These attractors would not necessarily have been negative, or need to go, but the introduction of new people into an environment should be sufficient for those behaviours to be questioned, even if only to justify them.

New or modified attractors will develop over time, which will also need to be questioned. Exposure to 'other' perspectives that occurs currently, due to the nature of the quarterly NZCOM National Committee meetings, also provides an opportunity for review.

Multiple ways of knowing/viewing (perspectives) are normal and vital for survival.

There is clearly a connection between this principle and the previous one. Opportunities for exposure to alternative views are healthy for an organisation's adaptive strategy and continued development. The maintenance of the MMPO and MERAS as separate entities to the College should also support the challenge of alternate views. The maintenance of consumer involvement in the governance of the College and in the monitoring of midwifery standards of practice at a regional level, would also maintain this heterogeneity of voices within the College.

The strength maintained in the regions by the College also contributes to this view. There will be regions where innovative strategies are more safely fostered, particularly those where self-employed midwives outnumber employed colleagues, or provide the bulk of the LMC services. Self-employment, or maintenance of budget holding by the health practitioner, would appear to foster innovation, less hampered by the dominant professions within the health sector (nursing and medicine).

Application of Theory To Practice

The Table below presents a summary of actions that midwives could take in order to increase the robustness of their services, based on the nature of complex systems identified by complexity theory.

TABLE 7.2: GUIDING ACTIONS FOR MIDWIVES BASED ON THE PRINCIPLES OF COMPLEXITY THEORY.

PRINCIPLE	GUIDING ACTIONS
All systems are connected and impact on each other.	• Symptoms in one part of the health service is likely to be caused by 'actions' in another, maybe in another part of the health sector. Midwives need to look at the bigger picture when identifying a 'problem' that they believe needs to be managed. • Think through actions well, because change in one part will influence another, maybe unexpectedly. • Maternity and midwives form only a small part of the health system, therefore, we are likely to be more successful if we accommodate and manage change rather then resist.
Perception of systems are context bound	• There will not be a homogenous perception of maternity service by midwives, therefore, decision-making over actions to take, would most usefully be consensus based, following analysis of contrasting views from a variety of sources.
There is no 'correct' service model	• The features of a service are shaped profoundly by their context, therefore, adaptation needs to fit closely with local needs and change owned and directed by those within. • Processes of change could be facilitated by an 'outsider', introducing and incorporating knowledge of other systems, but the direction and application should be managed by insiders/locals. This also enables development of variety in services, between localities, making the service overall more resistant to extinction.
Change is necessary for survival	• Change should be viewed as survival management and embraced, taking account of the voices of caution within the organisation. • Adaptive strategies should be evaluated and implemented with varying speed in response to environmental pressures and the ability of the midwives to mange the change. • Preparation should be made for significant changes

Systems develop patterns over time	• Midwives need to reflect on their practice and its context in order to recognise the development of unhealthy patterns, e.g., intervention rates. • They need to develop a tool to analyse the big picture and explore the down stream effects of these patterns, e.g. the impact of not using primary birthing facilities.
Multiple ways of knowing are vital for survival	• Mechanisms need to be in place to expose midwives to a variety of viewpoints. • Midwives need to keep in close contact with consumers in their area and have in place processes for receiving regular feedback on their services. • Midwives need to ensure their voices are heard within the wider health service.

The description of features of complex systems, such as the health service, identified through complexity theory, provides a useful framework for the development of strategies for midwives to manage the evolution, and consequently, the survival of their services. It seems clear, that these services will need to constantly change in response to a variety of local and national drivers. Rather than change for the sake of change, or responding instantaneously to a driver, some key organisational arrangements need to be present in order to enable informed decision-making and manage the change/adaptation process to the advantage of women and midwives.

Clearly, based on this framework, midwives need to be connected to each other, as well as to an organisation/system that can manage (and values) two-way communication. They would also need to be connected to their community in order to regularly 'touch base' with their constituents to ensure that their service is continuing to meet local needs and keep a watching brief on any potential risks to their service. For the same reasons, the national organisation would also have to have connections within the broader health, social services and political systems.

Communication and valuing of contrasting opinions within the organisation as a whole, willingness to change, and delegation of change management to local level would also seem a successful survival strategy. Exposure of a variety of midwives to the skills of change management would seem sensible, by fostering more of a horizontal leadership network throughout the system. Spreading responsibility and experience of

leadership would build leadership capacity within the organisation. This process should also build up and store a greater volume of both positive and negative experiences, particularly when the organisation has a small membership, which could be shared for consideration in future strategising.

The development of standardised services by midwives throughout the country would be risky, given the nature of complex systems, as would the application of firm policies and protocols. The use of frameworks and guidelines, as presented in Section 88, enable midwives to develop more flexible services and continue to evolve their services more responsively to local needs, whilst maintaining a degree of generic core similarity and being open to accountability and regular review.

The concept of negotiated decision-making, rather than the implementation of fixed 'rules', would reduce risk for both the midwife and woman, because this would allow the context of the specific situation to be factored. For example, such edicts as 'new graduate midwives need twelve months hospital experience before they go into independent practice', would not be supported. Such factors as the confidence of the midwife and level of local community (women and midwives) support and a multitude of other influencing factors, should be incorporated into decision-making by the new graduate midwife.

CONCLUSION

The development and application of the principles around the main tenants of complexity theory have enabled analysis of strategies, developed by midwives to enable their survival within the rapidly evolving health system in New Zealand. The ability to develop a multifaceted strategic and responsive approach to organisational development appears to have been facilitated through the application of these principles.

The organisation of maternity care by midwives in New Zealand is facing a crisis through the devolution of funding for their services to the DHBs. As illustrated in Part Six of this portfolio, the dominance of medicine and nursing within these health systems, place the continued autonomy of midwives over their scope of practice, at risk. The College of Midwives, which is made up of midwives and consumers from ten regions, representing membership throughout the country, has developed a set of strategies to manage the adaptation of midwifery services, in parallel with that of regional health service development, without becoming totally absorbed within them.

The future of midwives within rural settings seems contingent upon continuation of funding streams for the LMC services they provide, maintenance of the facilities and the ability of their voices and concerns to be heard and represented in a national forum. The midwives as individuals, need to maintain close contact with the College, constantly update their understanding of their local community health service environment and maintain networks with interfacing practitioners.

The development of the NZCOM with the linked organisations of the MMPO and MERAS should provide a constant flow of information for midwives to be used to guide the decision-making required to maintain constant adaptation to the health service environment in this country. These organisations also provide a unique interface between the professional and practice activities of midwives, making more robust, through collectivity, the midwives position within the health sector.

REFERENCES

Guilliland, K. (1998). *A Demographic profile of independent (self-employed) midwives in New Zealand Aotearoa.* Thesis for Masters of Arts in Midwifery. Victoria University. Wellington. New Zealand.

Guilliland, K. (2001). Shared care in maternity services: with whom and how? *New Zealand College of Midwives National Newsletter* (14)

Health Funding Authority. (2000). *Maternity services: a reference document.* Wellington, New Zealand

Health Funding Authority. (1996). *Notice issued pursuant to Section 51 of the Health and Disability Act 1993 concerning the provision of maternity services.* Wellington, New Zealand

Malcolm, L., & Mays, N. (1999). New Zealand's independent practitioner organisations. *British Medical Journal* (319) p1340-1342

Midwifery and Maternity Provider Organisation (1997) *Certificate of incorporation.* Christchurch NZ

Midwifery and Maternity Provider Organisation. (2001). Strategic Plan. Christchurch, NZ.

Ministry of Health. (2002). *Maternity Srvices: Notice pursuant to Section 88 of the Public Health and Disability Act 2000.* Wellington, New Zealand

Ministry of Health. (2001). *Report on Maternity 1999.* Wellington, New Zealand.

Ministry of Health. (2003). *Report on Maternity 2000-2001.* Wellington, New Zealand.

New Zealand Government. (2000). *New Zealand Health Strategy.* Wellington, New Zealand

New Zealand Government.(2001). *New Zealand Primary Health Strategy.* Wellington, New Zealand

New Zealand Health Information Service. (2002). *New Zealand Health Workforce Statistics 2001* in http://www.nzhis.govt.nz/stats/nursestats-p.ht

New Zealand College of Midwives (2002). Section 88 good news for women and midwives. *Midwifery News* June:25

New Zealand Government. (1990). *Nurses Amendment Act*, Wellington, New Zealand.

New Zealand Regional Health Authorities. (1993). *First steps towards an integrated maternity services framework.* Report by Coopers and Lybrand. Wellington New Zealand.

Pairman, S. (1998). *The Midwifery partnership: An exploration of the midwife/woman relationship.* Thesis for Masters of Arts in Midwifery. Victoria University Wellington New Zealand.

Tully, E. (1999). *Doing professionalism 'differently': negotiating midwifery autonomy in Aotearoa/New Zealand.* PHD Thesis, Canterbury University, New Zealand.

Appendix One

A WORKING DOCUMENT: A CHORONOLOGICAL ARRANGMENT OF KEY SOCIO-POLITICAL DEVELOPMENTS IN THE JOURNEY OF MIDWIFERY IN NEW ZEALAND

A WORKING DOCUMENT
HISTORICAL TIMELINE OF ISSUES IMPACTING ON MATERNITY SERVICES IN NEW ZEALAND[1]

1938 **Social Securities Act** gave universal access to social services including health services. Government provider for all (Cheyenne et al., 1997).

1971 **Amendment to the Nurses Act** ended the legal right of midwives to practice autonomously. All births were required to be supervised by a doctor (Pairman 1998).

1971 **NZNO** 'concerned specifically with nursing issues related to maternal and infant care' (Donley NZCOM J 19:p18-19:1998)

1973 **Royal Commission on Social Security** Need to develop community responsibility , shift from state responsibility. Need basic test for entitlement to state support. (Abel, 1997)

1973 **UK joined EEC** loss of free access to markets in the UK. Threat of economic destabilisation. Revisionist economic policy initiated.

1974 **White Paper on Health *(Labour govt.)*:** "A Health service for New Zealand" A call for rationalisation of health services in the light of economic crisis. (Abel, 1997)

1977 **Nurses Act.** Midwives were similar to nurses, defined as 'obstetric Nursing' (Pairman, 1998) .

1980s **Waning Medical Dominance.** Deprofessionalisation as lay knowledge increases. In hospitals increased technology calls for more technicians and the fragmentation of care (less direct control by doctors) and introduction of managers to handle administration tasks normally handled by the triumvirate of Doctor/Nurse/Manager (Abel, 1997)

Managerialism. State shift from direct provider to funder. Develops contractual relationships with variety of providers, not just doctors. Private and state boundaries redefined(Cheyenne et al., 1997).

1983 **Area Health Boards Act *(National Govt)* . R**edistribution of Hospital Boards (27) into 14 AHBs. Established over 1985-89. Population based funding and capped hospital budgets. (GPs remained uncapped and paid by DOH) (Cheyenne et al., 1997).

1983 **Amendment to the Nurses Act** enabled RNs who were not midwives to care for childbearing women. Excluded direct entry midwives from providing home birth or being in charge of a maternity hospital.

1983 **Save The Midwives** Consumer group formed in NZ.

1984 **Neo-liberal reform with labour back in power.** Focus on market forces = deregulation, individualism= individual basic unit for analysis, individual responsibility. (Abel, 1997)

International trend to minimise state intervention in the lives of citizens. These trends were based on the argument that 'anything beyond a minimalist welfare state undermines liberty, is inequitable, crowds out the private institutions of a civil society, weakened personal incentives and is economically damaging."(Boston, Dalziel & St John, 1999:vi)

1984 **Treasury Briefings.** Recommend user part charges, funder provider split (corporatisation of health service), competition between providers, more emphasis on community care, greater targeting of services. (Boston, 1992)

1986 **Commerce Act** enforced competition law, prohibits price fixing arrangements.

[1] This timeline was constructed to assist in the development of Part one of this portfolio. References can be found at that end of the paper.

1986 Health Benefits review "Choices For health Care"
Medical profession endorsed health policy as long as it enabled them to charge a fee independent of the GMS.

1987 Share Market Crash in NZ. Doctors seen as obstructive to change. Call for increase in efficiency and equity. Less medical input in health policy. Call for an independent review of Social Policy (Blank, 1994).

1987 Evaluation of the Advanced Diploma in Nursing programme (by midwifer students). Nurses training as midwives found the course unsatisfactory or very unsatisfactory. (Donley NZCOM J 19:p18-19:1998)

1987 NZNO Policy Statement on Maternal and Infant Nursing was rewritten.

1988 Royal Commission on Social Policy.

1988 National Midwifery Conference in Auckland. From here on midwives and consumers collaborated to bring about legislative change. (Pairman) Challenge from Joan Donely to disband the Midwives section of NZNO and form their own professional organisation.

1988 Report on Hospitals and Related Health Services Taskforce (Gibbs Report) Call for marketisation and commercialisation of the health sector. Purchaser provider split. 6 RHAs. "Modified Competition". (Boston, 1992)

1988 State Sector Act. Managerialism in the public sector. Move from administering to managing. (Abel, 1997) CEO of government departments. Focus on economic accountability (Boston, 1992)

1988 Cartwright Commission of Inquiry into Cervical Screening at National Womens Hospital. Call for increased accountability and responsiveness of doctors to consumers. Credibility of doctors under threat. Supports move in democratising the development of social policy. (Abel, 1997)

1989 First 1 year Diploma in Midwifery course. Separate from nursing.

1989 First AGM of NZCOM. In Christchurch in April. Consumers given equal rights to midwives in membership.
Philosophical underpinnings of midwifery partnership in NZ Midwifery (Pairman, 1997):

- Pregnancy and childbirth are normal life events,
- Midwifery is an independent profession,
- Midwifery provides continuity of caregiver,
- Midwifery is women centred.

1989 Public Finance Act. Legislated managerialism into the public sector. Reports to Crown Company Monitoring and Audit Unit (CCMAU) on financial performance of hospitals. Role of policy advisors within government departments changed, from professional to financial/economic focus. Government agencies more accountable for spending. (Boston, 1992)

1989 Children and Young Persons and their Families Act. Challenged the traditional models of professionalism. Shift of responsibilities to family and community agencies. The 'user movements and social movements' (Boston, 1992) questioned the traditional basis of professional expertise. Funder provider split in Vote health, Vote education and vote social welfare = more alternative and non-traditional providers.

1989 Discussion paper on Care for Pregnancy and Childbirth. Recommend development of policy for safe options for 'low risk' pregnancy. Consider draft consensus for management, ensure women have choice, ensure women have a voice.

- Obstetric standards Review Committee be disestablished,
- Appoint womens health advisor in each board,
- Facilities accommodate family and consumer needs.
- Keep rural maternity facilities.
- Education of health professionals include cultural safety,

- Provide interpreters.
- Involve consumers in service reviews.
- Pilot continuity of midwifery care.
- Support direct entry midwifery.
- Choice of birth location and carer be facilitated.
- Establish a perinatal database.
- Introduce informed consent for ultrasound in pregnancy.

1990 **Nurses Amendment Act.** Increase choices for women, competition for doctors in the provision of maternity services. Act enabled midwives to provide a complete Maternity service. (Pairman, 1998)

Support for the Act centred on:

- Increased choice for women
- Maximise the use of midwives' skills
- Reduce medical intervention,
- More support for postnatal care,
- More support for rural women.

Contraindications centred on:

- Midwives lack of knowledge to safely practice.
- Reduction in team work.
- Doctors best to recognise risks.

1990 **50 Midwives in NZ practiced independently.** Pairman)

1990 **Introduction of health Goals and Targets.** Increase focus on primary health care and public health problems, wellness and demedicalisation of some services, e.g. community and maternity.

1991 **Employment Contracts Act*(National Govt)*.** Lead to fragmentation of negotiation, as had to bargain with each employer separately. No longer collective contracts.

1991 **"Green and White paper" outlining the proposed health reforms.**

1991 **User part charges introduced.** (Introduction of residualism.

1992 **National Advisory Committee on Core Health Services** established

1992 **Maternity Services tribunal** called to negotiate 'the medical model maternity benefit schedule to accommodate midwives (Donley,1998). Drs claimed that midwives were blowing out the budget. Midwifery team able to argue that while philosophically different approaches, the fee was for a 'service of equal value' p19.

1992 **Accident Rehabilitation and Compensation (medical Misadventure) Regs.**

Abolished protection of midwives form most forms of medical mal practice. This move potentially leads to an increase in defensive practice (Donley NZCOM J 19:p18-19:1998)

1993 **400 Midwives practised independently** Guilliland, 1998).

1993 **Consumers Guarantee Act** Focus on consumer rights and informed choice.

1993 **Health and Disability Services Act**

- Established 4 RHAs received funding from the govt to purchase services for the public & enter into contracts with providers.
- All primary, secondary and disability services funding was integrated into a single budget.
- User part charges were introduced.

1993 **Negotiation over Section 51 the Health and Disability Services Act.** Included NZCOM, HFA and NZMA.

Care of mother and baby after normal delivery. Report to National Advisory Committee on Core Health and Disability Support Services.

1993 First step towards an integrated maternity Services Framework. Coopers and Lybrand report to the RHAs.
Current problems with the system: fragmentation of funding, fragmentation of care, differing philosophies, inequity of access, lack of balanced information, lack of statistical data.

1993/94 Regional Health Authorities' purchasing framework: Looking for alternative contracting arrangements, wants providers interested in pilot projects, detailed primary and secondary maternity service specifications developed, access to care document used for contracting, proposal to have women choose a lead professional.

1994 Health Information Privacy Code

1994 Health and Disability Commissioners Act. 'Established the Code of Health and Disability Commissioners Rights'

1994 National Advisory Committee on Core Health and Disability Support services. To obtain independent advice on health and disability services to ensure accessible and efficient services.

1994 Industrial challenges for NZNO who represented most of hospital based midwives. Midwives desire to work both independently and in the CHE (alright for Doctors!!) (O'Connor, 1994)

1994 Planning for the South: Access to health and Disability Services in the Southern Region. SRHA 1994 Maternity Services: Community feedback

- 60 mins from hospital for normal birth and 30 mins antenatal and 6 wks pn visit.
- 90 minutes for specialist maternity services.
- 60 mins antenatal classes.

1995 Review of activities NZCOM involved in: (Donley,1998)

- Established Standards for Practice,
- Development of Standards Review process for Independent Midwives,
- Access Agreement negotiations,
- Development of Direct Entry and Post grad programmes for midwives,
- Development of secondary care courses,
- LMC Midwifery data base,
- Maori Liaison development,

1995 Code of Rights for Health Consumers established by the Health and Disability Commissioner. Concern that this left practitioners 'to carry the can for a flawed system' (Donley p18-19:1998) a poorly resourced and fragmented system places practitioners at risk.

1996 Coalition agreement on health policy*(National Gov)*. Changes to health system with incoming government: Single HFA, MOH became responsible for the CHEs, CHEs became Regional Hospitals and Community Services, longer-term contractual funding arrangements based on benchmarking rather than competition, increase in health funding, increased emphasis on Maori, child and mental health (Boston et al., 1999).

1996 Briefing to the incoming MOH Failure of CHEs to achieve cost reductions:

- Inflation of wages and non-labour inputs
- New managers into system where there was little information on costs and outputs,
- Initial cost savings attempted through contracting out peripheral services rather than focusing on core clinical services that accounted for most costs.
- Little had been spent by past health services on facility maintenance and equipment replacement.
- Incentives to perform blunted by deficit top ups and CEO bonuses even if poor economic achievement.

- Public unwilling to have disruption to the services during transformation.
- Overly optimistic efficiency gains predicted.

1996 Impact of Contracting for services
Costs of contracting (transaction costs) have been unexpectedly high. (researcher's own experience of days involved in negotiation, then outcomes (financial) monitoring costs). Reasons for high costs:
- Layers of bureaucracy to support the process,
- Poor state of information systems to support the process,
- Legalistic process, (impact of Commerce Act, Privacy Act, HDS Act, Employment Contracts Act)
- Desire for complete specification of all obligations,
- Financial environment,
- Gap between RHAs funding and costs of services,
- Adversarial relationships between providers.

1996 Changes in primary sector: Development of IPAs (impact of requiring collective bargaining power). By 1997 70% of GPs belonged to one. Focus on economising on costs of pharmaceuticals and diagnostics. Savings reinvested within the practices. Little examination of impact on quality from patient's perspective. Loss of democratic accountability because of loss of elected representative boards (Boston et al., 1999).

1996 New Section 51 Advice notice in modular payment forms.

1996 Nursing Council of NZ development of standards and competencies for midwifery registration

1967 Modular payment system introduced with either Dr or midwife as LMC. CHEs also able to claim and developing relationships with Drs to provide cheap midwifery services.

1997 Move away from competition towards patient focused services (international trend); Encouragement of collaboration and co-operation rather than competition. (Boston et al., 1999)
- Purchaser provider split at Govt level abandoned,
- CHEs made non for profit,
- Back to universal provision of some services
- Purchaser provider split at operational level,
- Contracting for 'funding' rather than 'purchasing',
- Increased bureaucracy in HFA by retaining the 4 RHA offices as service centres,
- CHEs to maintain financial accountability over all costs,

1997 591 Midwives in NZ (out of 1800 practicing) identified themselves as self employed (NZCOM).

1997 Focus on Social Capital. "In order to draw together 2 key goals for the government of economic growth and social cohesion, we need to reach agreement over what is understood by the term social capital and give explicit attention to the process of policy development and ways in which social capital can impact on it." (Social Capital and Policy Development. D.Robinson Ed. 1998:3) Ideas associated with social capital are:
- Encouraging voluntary associations,
- Deliberative democracy,
- Community networks,
- Interface between sectors
- Is a feature of communities rather than individuals.

1998 **Nursing Council of NZ recognises Midwifery Standards Review process** as demonstration of ongoing competence to practice. (Pairman, 1998)

1999. **Review of Maternity Services in New Zealand National Health Committee** report Quality of Hospital environment: In all recent surveys aspects of hospital facilities and care were the most common area of concern. Pressure to leave early and quickly. Rural women and those with complications LSCS, multiple pregnancy, experienced the best service.

- 1:4 received fewer than 5 postnatal home visits, midwife LMCs providing more than other LMCs.
- 94% of NZ births occur in hospitals, 70% had a NVD, 12% operative vaginal delivery, 18% LSCS
- reasons for increase in caesarean section rate: increasing maternal age, more accurate recording of actual activities, increased funding for complicated pregnancies, more proactive management of pregnancy and labour including improved diagnostic techniques.
- Operative procedures higher among higher income women.
- Section rates vary by provider from 12-23% (97/98 national figures)

1999 1900 practicing midwives. 83% NZCOM members. 5 of 11 regional co-ordinators are CHE midwives (Donley NZCOM J 19:p18-19:1998)

1999 **Health Occupation Registration Amendment Act.** Membership of Nursing Council: 3 RNs, 2 RMs, 2 Reps from N/M education sector, 4 others, 1 a midwife and 1 a nurse, MOH appoints all members.

Appendix two

ETHICS APPROVAL NOTIFICATION FROM THE UNIVERSITY OF TECHNOLOGY SYDNEY HUMAN RESEARCH ETHICS COMMITTEE

Research Office

Director
Angeline Farmer

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Australia

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University of Technology, Sydney

9 April 2001

Professor Lesley Barclay
Department of Nursing, Midwifery and Health
BROADWAY CAMPUS

Dear Lesley

UTS HREC 01/16 - BARCLAY, Professor Lesley (for HENDRY, Ms Chris - Dr of Nursing student) – "Development of midwifery within maternal hospital settings in the South Island of New Zealand 1990-2000"

The Committee considered the above application at its meeting of 3 April 2001 and expressed the following concerns:

1. given the distance, all information for respondents should include an email address as well as a contact telephone number for Professor Lesley Barclay;

2. the consent should include the standard complaints paragraph with contact details (including email address) for Ms Davis as well as a local contact person;

3. to avoid any confusion between Ms Hendry's different roles, all information, including the questionnaire, should clearly identify her as a doctoral student of UTS; and

4. more information should be provided as to how Ms Hendry proposes to analyse the data obtained.

The Committee also requested that the consent form be contained on a single page. They suggested that this could best be accomplished by having one side of the form as purely an information sheet, with a simplified consent form on the other side.

So as not to delay the research unnecessarily, the Committee has authorised me to approve the application on provision of a response to the above concerns.

Your reply should be sent to Susanna Davis, Research Ethics Officer, Research Office, Broadway. In the meantime, if you have any queries please do not hesitate to contact either Susanna or myself.

Yours sincerely

Production Note:
Signature removed prior to publication.

Professor Ashley Craig
Chair
UTS Human Research Ethics Committee

Appendix three

CONSENT FOR PARTICIPATION IN THE RESEARCH PROJECT

CONSENT FORM

Please complete this if you would like to be contacted by Chris for individual interviews and/or participation in focus group discussion over the questionnaire findings.

Midwifery Research Project

'Development of midwifery within primary maternity hospital settings in the South Island of New Zealand 1990 - 2000'

Researcher:	**Supervisor:**
Chris Hendry RGON RM BA MPH 88b Clyde Road Christchurch Ph (03) 3489347 or (021) 655355 Student in the Professional Doctorate in Midwifery Programme at the University of Technology Sydney.	Professor Lesley Barclay RN CM BA MEd PhD Director Centre for Family Health & Midwifery University of Technology Sydney PO Box 123 Broadway NSW Australia Ph +61 2 95141678 or lbarclay@uts.edu.au

This research project has been approved by the UTS Ethics Committee

How to lodge a complaint

If you have any concerns, queries or complaints about this research that you are not happy to discuss with the researcher, please contact either supervisors named at beginning of this form, or,

Susanna Davis	**New Zealand Research Contact:**
Research Ethics Officer University of Technology, Sydney PO Box 123 BROADWAY NSW 2007	Patrice Hickey Head of Midwifery School Christchurch Polytechnic Madras St, Christchurch PH (03) 3649074

Purpose of study:

This research project is designed to provide an overview of midwifery initiatives in primary (low risk) maternity facilities in the South Island of New Zealand. The aims of this research are to:

- Identify contextual determinants that have influenced the development of changes within primary maternity hospitals in the South Island of New Zealand over the last decade.
- Identify the features of the midwifery services provided by the midwives within this setting and events that lead to their establishment.
- Identify issues that enhance and challenge the continued development of midwifery in these settings.

Stages of the research:

1. Questionnaire to obtain a 'scan' of midwifery within primary facility settings
2. Individual or group interviews and discussion to clarify key themes and findings.
3. Presentation of an overview or 'scan' of the organisation of midwifery practice in the study settings in a dissertation (thesis), for publication and conference presentation.
4. To inform the New Zealand College of Midwives and midwifery practices for the development of strategic planning and midwifery service initiatives.

Your participation in this research:

1. You are asked to **complete a questionnaire**, either as a midwife managing a facility or as a midwife accessing the facility (2 separate questionnaires have been designed, one for each midwife category).
2. **Return this completed consent form with your completed questionnaire** if you would like to continue involvement in this project.
3. **You will be contacted by Chris,** if you agree, to take part in an interview, either group or individual. (Arrangements will be made as convenient to you).

You are free to withdraw from this project at any time.
When contacted about the interview(s) you may at that stage or any other choose not to take part.

Identifying material
Unless agreed by you, no data will be made available to others or published, that intentionally identifies you personally.

Both questionnaires and interview notes will be de-identified prior to archiving for further midwifery research.

I____________________________(Midwife) agree to be contacted about

taking part in an interview and/or focus group for this research.

Signature __________________________________ Date: ____/____/____

Midwife (first name) _______________________

Mail Address:____

Contact phone number:______________ Email:_______________________

___________________________ Date: ____/____/____
Witness

(Please sign 2 copies. Send in one with your questionnaire and retain one for your information)

Appendix four

CONTEXTUAL SCAN QUESTIONNAIRE (FACILITY)

CONTEXTUAL SCAN OF MIDWIFERY SERVICES PROVIDED THROUGH PRIMARY MATERNITY FACILITIES IN THE SOUTH ISLAND OF NEW ZEALAND
Facility questionnaire

This research will form part of a Professional Doctorate in Midwifery .

Researcher: Chris Hendry. RGON RM BA MPH

Contact details:

PH

Fax: (03)3489317

Email:

Supervisor: Professor Lesley Barclay
University of Technology Sydney
Ph (00612) 9552541

Completion of this questionnaire is voluntary and specific, identifiable findings will only be disclosed with your permission.

The objectives of this questionnaire are to:

- provide an overview of midwifery services provided out of primary maternity facilities in the South Island of New Zealand from a midwifery perspective,
- assist in analysis of key issue that have shaped the development of these services and those with the potential to threaten their survival,
- form the basis of a strategy for maintenance and further development of primary maternity facilities in the South island of New Zealand.

The results of this questionnaire will be collated with others and an overall perspective of midwifery services provided out of South Island Maternity facilities will be obtained. Publication of the findings will be contained within a thesis from which articles will be published.

I will also be making a similar questionnaire available on the NZ midwives internet chat line for midwives to complete in order to seek further information on the reality of providing midwifery services in rural and primary maternity facilities.

Please contact me if any parts of the questionnaire are not clear.

Thank-you for agreeing to complete this. Please could I have the questionnaire returned to me in the enclosed envelope by 06 August 2001

A GUIDE TO COMPLETING THIS QUESTIONNAIRE

Please find attached a questionnaire based on the contextual scanning. This questionnaire has been distributed to all primary maternity units in the South Island for midwives who provide a service from these facilities to complete. Only one questionnaire has been sent to each facility.

It is anticipated that:

- A midwife will complete the questionnaire
- The midwife represents the views of her colleagues (as best as possible)
- The answers are representative of the midwives based out of the facility.

No identifying information provided by individual services will be made available to others.

CONTEXTUAL SCANNING

This method has been developed to assess internal and external surroundings and forces at work within the various contexts in which we practice. This enables alignment of strategies with environmental needs and helps us to identify current and potential:

- trends
- threats
- opportunities,

for use in service planning and evaluation.

Contextual scanning is based on environmental scanning which is used in community planning. It allows a multidimensional view to be obtained by encouraging a focus on:

- changing population and demographics,
- political, social and ecological changes,
- workforce patterns,
- changing technology and the information explosion,
- personal, local and national economic influences.

QUESTIONNAIRE FOR USE IN THE DEVELOPMENT OF A CONTEXTUAL SCAN OF COMMUNITY MATERNITY SERVICE IN THE SOUTH ISLAND OF NEW ZEALAND

Criteria for inclusion in the scanning process:

- The service is based around a facility/hospital.
- The facility is defined as a 'primary maternity facility'
- Midwives are employed, own or have access agreements to provide maternity services based in the facility.

CONTEXTUAL SCAN

Part 1 Scope and function of the service.

Clarify the scope, role and function of the maternity services provided based from the maternity facility. Please ✓☐ or x☐

1. The person completing the questionnaire is (may tick more than one):

☐ An employed midwife
☐ A midwife owner
☐ A midwife contracted to provide midwifery services in the facility
☐ The manager/facilitator of maternity/midwifery services.
☐ Not a midwife

2. Your facility/hospital/birthing unit (may tick more than one):

☐ *Is a trust hospital*
☐ *Is a hospital attached to an HHS or Community Board.*
☐ *Also has general beds (number _________)*
☐ *Is owned by the midwife(s)*
☐ *Is a midwifery only facility*

Distance in time from the secondary facility: (minutes)______________

3. Number of maternity beds: __________Other beds: ________

4. Total population of locality served by the facility: ____________

5. District Health Board Region:

☐ Nelson Marlborough
☐ Canterbury
☐ Otago
☐ West Coast
☐ South Canterbury
☐ Southland

6. **Number of midwives employed by (or own) the facility:**

*Continuity:*____________

Core (shift work in the hospital): _______________

7. **Number of midwives contracted to access the facility:** ______

8. **Maternity and midwifery services offered <u>from the facility</u>:**

<u>A. Pregnancy and parenting programme</u>

Number of programmes: ________________________

Numbers attending/year: _______________

Midwifery involvement: ________________________

<u>B. Maternity cases in total provided in your facility:</u>

i Midwifery LMC (cases/year): *❑0 ❑0-10 ❑11-20 ❑21-30 ❑31-40 ❑41-50 ❑51-60 ❑61-70 ❑71-80 ❑over 100*

ii Doctor LMC (Cases/year): *❑0 ❑0-10 ❑11-20 ❑21-30 ❑31-40 ❑41-50 ❑51-60 ❑61-70 ❑71-80 ❑over 80*

iii Shared Care with doctor (Cases/year): *❑0 ❑0-10 ❑11-20 ❑21-30 ❑31-40 ❑41-50 ❑51-60 ❑61-70 ❑71-80 ❑over 80*

iv Postnatal midwifery care (Cases/year): *❑0 ❑0-10 ❑11-20 ❑21-30 ❑31-40 ❑41-50 ❑51-60 ❑61-70 ❑over 70*

v Any further comments about the maternity care <u>options</u> offered:

____

9. **Medical Obstetric care (may tick more than one):**

What options are available in your locality?

a) No medical obstetric care available ❑

b) Obstetrician holds clinics ❑

c) GP Obstetrician ❑

d) GP back up ❑

e) Obstetrician visits on request ❑

f) Other options: ____________________________________

10. Identify the range of staff involved in maternity service delivery in the facility:

	Numbers: full time	*part time*
a) Registered Midwives	☐	☐
b) Registered Nurses (Not including midwives)	☐	☐
c) Hospital Aids	☐	☐
d) Obstetric Nurses	☐	☐
e) Maternity Nurses	☐	☐
f) Karatane nurses	☐	☐

Others ____

____

11. Who is responsible for managing the maternity service and what role do the midwives have in management? ____________________

____

____

____

____

12. Clarify <u>the role</u> of the midwife(s) in your facility:

A. Continuity of care:

Does your facility provide continuity of midwifery care to women? ☐

***(Answer to following questions *if your facility offers continuity of care*)**

Care arrangements (eg does each woman have an identified midwife?):

Please explain the care arrangements you have:

- with women: ____

  ____

  ____

  ____

  ____

  ____

- with other midwives and doctors:

  ____

  ____

____

____

- back up in the facility: ______________________________

____

____

<u>Average caseload</u> for each *employed* midwife/year:

(Answer only if you have continuity midwives owning or employed by the facility)

- **LMC** ____________________
- **Shared care** ________________
- **Antenatal Postnatal midwifery care** ________________
- **Midwifery labour care** __________________________
- **Other** ____________________________________

***<u>Place</u> of care delivery, home, clinic or facility** (may be more than one):*
(Answer only if you have continuity midwives owning or employed by the facility)

Antenatally: ______________________________________

Labour and birth: __________________________________

Postnatally: ______________________________________

B. To maintain the facility:

i Which staff provide the ongoing maternity care <u>within the facility</u> to support the continuity of care midwife?

☐ Registered Nurse (s)

or

☐ Registered Midwife (s)

or

☐ Other: ________________________________

ii The role of the facility based (core) staff above:

A. Description of role generally:

____

____

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____

____

iii What midwifery care is provided, (other than by the continuity midwife), in the facility when a woman is:

- In labour: ______________________________

____

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____

- Postnatally: ______________________________

____

____

____

iv The non-midwifery core staff's relationship with women:

Antenatally: ______________________________

____

____

In labour: ______________________________

____

____

Postnatally: ______________________________

____

____

____

____

vi Preparation and back up for non midwives providing inpatient maternity care for women: ______________________________

____

____

CONTEXTUAL SCAN:

Part 2 The External Environment.

This part of the scan requires you to assess trends and issues that have the potential to influence your facility and practice and the need for your services within the broader community (and national) context.

Please note that you are only expected to identify the key/most important factors under each of the following questions.

1. **How would you describe the social, cultural, features of the population of the community you work in** (e.g ethnicity, family support, transient population, fertility levels, health and well being of the community, density of population........),

____

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2. **What are the key geographic features of the location of your facility and their impact on the service you and your colleagues can provide:** (e.g ease of access to clients, weather, location of population density/towns and related facilities..........)

____

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____

____

3. What <u>economic factors</u> in your area influence your practice and impact on the women? (E.g. employment levels, cost of living in the locality, incomes levels, unique costs of service provision in your location, limited clientele to maintain viability of practice).

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4. What <u>political factors</u> influence the practice in your locality? (e.g relationships with: Trust/community board, other practitioners, GP Midwives, Plunket, Secondary referral service, other health providers)

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5. What influence has technology had on your facility and the service you can provide (eg Telecommunications, mobile equipment, medication, expectations of consumers for diagnostic tests)

6. What significant features of health services development over the last 5-10 years has impacted positively and negatively on service provision by you and your colleagues.

7. What have been the most important features of midwifery professional development in New Zealand that have enabled you to provide a midwifery service to women.

CONTEXTUAL SCAN:

Part 3 The Internal Environment.

This part of the scan requires you to assess trends and issues, threats and opportunities that have the potential to influence your practice and the need for your services within the local maternity setting.

Framework: Please note that you are only expected to identify the key/most important factors under each of the following

1. **What role do consumers have in the support and development of midwifery and maternity services provided through your facility?**

What further potential is there for consumer involvement and what inhibits this?

____

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2. What physical features (layout and location) of the facility influence positively and negatively on the midwifery services provided.

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3. What features of the management and administration of the facility (and the referring agents) impact positively and negatively on the quality of service able to be provided from the site.

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4. What <u>staffing/workforce</u> issues impact positively and negatively on the quality of service able to be provided from the site.

5. What aspects of <u>inter-professional co-operation</u> impact positively and negatively on the quality of service able to be provided from the site?

6. What technology and equipment would enhance the service you are able to offer in the facility?

7. What type of education and training should be provided and maintained to enable you to continue to provide an evidence based service to women from the facility?

8. Please summarise any other key issues you believe should be included in this scan:

Contextual scans provide the basis for strategic planning. I hope that you have also found this process useful in identifying some priorities for development of your service.

A summary of collective (and non-identifiable) findings will be made available to all participants.

Thank-you for taking part in this process.

Researcher contact details:
Chris Hendry

Appendix five

CONTEXTUAL SCAN QUESTIONNAIRE (MIDWIFE)

CONTEXTUAL SCAN OF MIDWIFERY SERVICES PROVIDED THROUGH PRIMARY MATERNITY FACILITIES IN THE SOUTH ISLAND OF NEW ZEALAND:

Midwife's questionnaire

This research will form part of a Professional Doctorate in Midwifery .

Researcher: Chris Hendry. RGON RM BA MPH

Contact details:

PH Fax: (03)3489317

Email:

Supervisor: Professor Lesley Barclay

Ph (00612) 9552541

Completion of this questionnaire is voluntary and specific, identifiable findings will only be disclosed with your permission.

***If you would also like to take part in a focus group or individual interview please sign the attached consent form.**

The objectives of this questionnaire are to:

- provide an overview of midwifery services provided out of primary maternity facilities in the South Island of New Zealand from a midwifery perspective,
- assist in analysis of key issue that have shaped the development of these services and those with the potential to threaten their survival,
- form the basis of a strategy for maintenance and further development of primary maternity facilities in the South island of New Zealand.

The results of this questionnaire will be collated with others and an overall perspective of midwifery services provided out of South Island Maternity facilities will be obtained. Publication of the findings will be contained within a thesis from which articles will be published.

I have sent a similar questionnaire to the manager/provider of midwifery services in primary maternity in the South Island.

Please contact me if any parts of the questionnaire are not clear.

Thank-you for agreeing to complete this. Please could I have the questionnaire returned to me in the enclosed envelope by 13 August 2001

A GUIDE TO COMPLETING THIS QUESTIONNAIRE

Please find attached a questionnaire based on contextual scanning. This questionnaire has been distributed to midwives working out of primary maternity units in the South Island.

It is expected that:

- You are a midwife and you provide services within a primary maternity facility, either as a core, employed or self employed continuity midwife.

CONTEXTUAL SCANNING

This method has been developed to assess internal and external surroundings and forces at work within the various contexts in which we practice. This enables alignment of strategies with environmental needs and helps us to identify current and potential:

- trends
- threats
- opportunities,

for use in service planning and evaluation.

Contextual scanning is based on environmental scanning which is used in community planning. It allows a multidimensional view to be obtained by encouraging a focus on:

- changing population and demographics,
- political, social and ecological changes,
- workforce patterns,
- changing technology and the information explosion,
- personal, local and national economic influences.

Please indicate District Health Board Region you practice/work in:

❒ Nelson Marlborough	❒ Canterbury
❒ West Coast	❒ South Canterbury
❒ Otago	❒ Southland

A. Mainly **rural or urban** practice : ____________________

B. **Total Population** in your locality: ____________________

C. **Total Births** in your locality: ____________________

D. **Range of your practice** in kilometres: ________________

E. **Average travelling time** per woman (for entire episode of care):____________

QUESTIONNAIRE FOR USE IN THE DEVELOPMENT OF A CONTEXTUAL SCAN OF COMMUNITY MATERNITY SERVICE IN THE SOUTH ISLAND OF NEW ZEALAND

Criteria for inclusion in the scanning process:

- You provide midwifery care at some stage within a primary and/or rural maternity facility (hospital, birthing centre, maternity unit).

CONTEXTUAL SCAN

Part 1 Scope and function of the service.

Clarify the scope, role and function of the maternity service you are employed or have access to provide based out of the maternity facility. √❐ or x❐

1. **You are** (may tick more than one):

❐ An employed core midwife
❐ An employed continuity midwife
❐ A midwife owner of the facility
❐ A midwife with an access agreement to provide midwifery services in the facility
❐ Other ______________________________

2. **The number of *primary* maternity facilities you access/work in** ☐

3. **The primary facility/hospital/birthing unit you access *most frequently*:**

❐ *Is a trust hospital*
❐ *Is a hospital attached to a District Health Board.*
❐ *Also has general beds (number ________)*
❐ *Is owned by the midwife(s)*
❐ *Is a midwifery only facility*

*Distance in time from the secondary facility: (minutes)*______________

4. **Number of maternity beds in this facility:** ☐

5. Are there midwives employed to work in this facility?

	Yes	No
- *On core shifts*	☐	☐
- *On continuity*	☐	☐

6. What medical obstetric care is available in your locality (may tick more than one):

A. No medical/obstetric care available ☐

B. Obstetrician holds clinics ☐

C. GP Obstetrician ☐

D. GP back up (no obstetric training) ☐

E. Obstetrician visits on request ☐

F. Emergency back up/support:

7. Identify the range of staff involved in maternity service delivery in the *primary facility* you access most.

A. Registered Midwives ☐
B. Registered Nurses (Not including midwives) ☐
C. Hospital Aids ☐
D. Obstetric Nurses ☐
E. Maternity Nurses ☐
F. Karatane nurses ☐
Others ____________________________

8. Who is responsible for managing the maternity service and what role do you have in advising, consulting with management?

Management role:

Your relationship with them and input into service development:

9. Clarify your role when you have a woman in the primary facility:

9.1. Care arrangements: Please explain the care arrangements you have:
(eg does each woman have an identified midwife?)

- with women:

- with other midwives and doctors:

- with colleagues:

9. 2. Average caseload you have in a year:

- **LMC** ______________________
- **Shared care** ___________________
- **Antenatal Postnatal midwifery care**_____________________
- **Midwifery labour care** ______________________________
- **Other** ____

9.3. The location from where you provide care, home, clinic or facility (may be more than one)**:**

Antenatally: ______________________________

Labour and birth: ______________________________

Postnatally: ______________________________

9.4 To support you <u>while you have a woman in the facility what *midwifery care* is provided</u> when a woman is:

- In labour: ______________________________

  ____

  ____

- Postnatally: ______________________________

  ____

  ____

  ____

9.5 Please outline your expectations of the role of 'core staff' generally:

Midwives:

Registered Nurses:

'Hotel staff'

Reception staff:

9.7. The core staff's clinical/professional relationship with women:

Antenatally:

In labour:

Postnatally:

10 What preparation and support do you think should be provided for non midwives providing inpatient maternity care for women:

CONTEXTUAL SCAN:
Part 2 The External Environment.

This part of the scan requires you to assess trends and issues that have the potential to influence your facility and practice and the need for your services within the broader community (and national) context.

Please note that you are only expected to identify the **key/most important** factors under each of the following questions.

1. **Would you describe the community in which you work as mainly:**
   (You may tick more than one)
   rural ❐
   provincial ❐
   urban ❐

2. **What distance (in hrs and mins) are you mainly working from:**

   Primary facility ____________________

   Secondary referral facility ________________

How would you describe the social, cultural, features of the population of the community you work in (e.g ethnicity, family support, transient population, fertility levels, health and well being of the community, density of population........),

3. **What are the key geographic features of the location of the facility and their impact on the service you and your colleagues can provide from the facility:** (e.g ease of access to clients, weather, location of population density/towns and related facilities..........)

4. What economic factors in your area influence your practice and impact on the women? (E.g. employment levels, cost of living in the locality, incomes levels, unique costs of service provision in your location, limited clientele to maintain viability of practice).

5. What political factors influence the practice in your locality? (e.g relationships with: Trust/community board, other practitioners, GP Midwives, Plunket, Secondary referral service, other health providers)

6. What influence has technology had (or not had) on the facility and the service you can provide (eg Telecommunications, mobile equipment, medication, expectations of consumers for diagnostic tests)

7. What significant features of health services development over the last 5-10 years has impacted positively and negatively on service provision by you and your colleagues.

8. What have been the most important features of midwifery professional development in New Zealand that have enabled you to provide a midwifery service to women.

9. What have you noticed about women use of primary facilities to birth in and what influences women choice to birth in a primary facility>

CONTEXTUAL SCAN:
Part 3 The Internal Environment.

This part of the scan requires you to assess trends and issues, threats and opportunities that have the potential to influence your practice and the need for your services within the local maternity setting.

Please note that you are only expected to identify the **key/most important** factors under each of the following

1. What role do consumers have in the support and development of midwifery and maternity services provided through the primary facility?

2. What further potential is there for consumer involvement and what inhibits this?

3. What physical features (layout and location) of the facility influence positively and negatively on the midwifery services provided.

4. What features of the management and administration of the facility (and the referring agents) impact positively and negatively on the quality of service able to be provided from the site.

5. What staffing/workforce issues impact positively and negatively on the quality of service able to be provided from the facility.

6. What aspects of inter-professional co-operation impact positively and negatively on the quality of service able to be provided from the facility?

7. What technology and equipment would enhance the service you are able to offer in the facility?

8. What type of education and training should be provided and maintained to enable provision of an evidence based service to women from the facility?

9. Please summarise any other key issues you believe should be included in this scan:

Contextual scans provide the basis for strategic planning. I hope that you have also found this process useful in identifying some priorities for development of your service.

A summary of collective (and non-identifiable) findings will be made available to all participants.

Thank-you for taking part in this process.

Researcher contact details:
Chris Hendry

Appendix six

PAPER DEVELOPED FROM PART ONE OF THIS PORTFOLIO, 'RIDING THE WAVES OF CHANGE: THE DEVELOPMENT OF MODERN MIDWIFERY WITHIN THE NEW ZEALAND HEALTH SECTOR', PUBLISHED IN THE NEW ZEALAND COLLEGE OF MIDWIVES JOURNAL (25) OCTOBER 2001.

RIDING THE WAVES OF CHANGE:
THE DEVELOPMENT OF MODERN MIDWIFERY WITHIN THE NEW ZEALAND HEALTH SECTOR

ABSTRACT

Midwives do not work in social isolation. Most would probably agree that they work within a politically labile environment. This paper presents the case of New Zealand midwives' transition to autonomous practice as an example of opportunistic positioning by the profession, enabling us to ride the waves of change in the last decade of the twentieth century. The socio-political environment that existed within New Zealand in the late 1980s fostered the passage of legislation in 1990 that enabled New Zealand midwives to practice independently from nurses and doctors. An historical review of the impact of key socio political events and legislative changes on New Zealand midwifery will be presented, to illustrate that the profession in this country was well positioned by the late 1980s to take advantage of a rising consumer movement, the questioning of medical dominance and a government sympathetic to womens' health issues. While achieving the milestone of legal autonomy in 1990, the challenges involved in developing the midwifery profession were complicated a few years later by complex market driven health reforms. Yet, the midwives appeared to position themselves well to meet the challenge of this changed political environment. What can we learn from this experience?

INTRODUCTION:

Midwives in New Zealand achieved the legal right to practice independently from medical practitioners in 1990, with an amendment to the 1977 Nurses Act. This legislation enabled midwives, to provide care for women during their entire childbearing experience, free of charge

regardless of the service setting, without the supervision of a doctor or registered nurse. This achievement also entitled midwives to the same remuneration and rights of access to maternity hospitals as doctors. This was a significant achievement.

The work involved in maintaining the autonomy and scope of practice of midwifery in New Zealand is not over. Change is constantly with us, particularly as we go through yet another set of health reforms, which appear to focus on the concepts of collaboration and teamwork. Questions asked at this time, by both midwives and health service planners, center on identifying where midwifery belongs within the reforming health sector environment. This paper will not provide the answers, but plans to highlight the manner in which midwifery evolved over time in response to previous sociopolitical events. This involved reading the environment and adapted to meet the challenges. There are lessons to be learned from this process which may be useful in the future.

Examination and analysis of the philosophical and practical determinants of social policy and legislative developments will be used to position midwifery within the current New Zealand health care environment. The historical development of legislative and policy 'signposts' following the emergence of the welfare state in New Zealand in 1938 provide a framework within which the emergence of modern midwifery in this country will be investigated. The waves of change gathered over time and with astute positioning by midwifery leaders, the profession as a whole benefited through being able to ride the waves through the health reforms of the mid 1990s and into the twenty first century.

IMPACT OF THE ECONOMIC ENVIRONMENT ON THE DEVELOPMENT OF HEALTH POLICY OVER TIME

Social policy, in its most broad sense can be defined as actions that the government enshrines in legislation in order to shape the distribution of and access to goods and resources within society (Cheyne, O'Brien & Belgrade, 1997). Health policy is inextricable linked with social policy because to the identification of health care as a social good (Blank, 1994). The midwifery profession and the services midwives provide appear to be intimately dependent on the nature of social policy direction taken by the government of the day. Social policy direction is in turn

influenced by the economic environment which determines the level of social good available to be dispensed to citizens and at what cost (Cheyenne et al., 1997).

To understand the place of midwifery within New Zealand maternity services in the 1990s, it is necessary to reflect on key social policy initiatives and influences in the past that have shaped the development of these services. The parameters for the role of the state in health funding in New Zealand were laid out in the 1938 Social Security Act (Fougere, 1992). Maternity services were clearly included within "Health Services" from this point on. This Act provided the backdrop for the development of a comprehensive social welfare system and gave future direction to social policy generally. More specifically it shaped citizens' expectations of access to health care which appears to persists to the present day, namely that it should be

- universally available regardless of personal economic status,
- easily accessible,
- responsive to consumer demand,
- based around medical practitioners as ideal agents for the consumer (Abel, 1997).

Economic buoyancy internationally and political stability internally enabled the continuation of universal access to relatively free and stable health services in New Zealand for the following forty years.

A change in focus was heralded by a 1973 Royal Commission on Social Security in New Zealand. The Commission's report articulated the need to develop greater community responsibility and a shift from total state responsibility for welfare was called for. The report was released within an increasingly unstable economic environment (Cheyenne et al., 1997). A seemingly necessary focus on the added cost of health care, largely compounded by an ageing population and greater reliance on pharmaceuticals and technology, precipitated a 'White Paper' on health the following year.

This paper entitled 'A Health Service for New Zealand' (1974) was hurriedly commissioned by the then Labour Government, in response to the Royal Commission's report, in order to provide a framework for it's health policy in the light of a forth coming election. This unpopular document predictably called for a rationalisation of health services in response to a looming economic crisis and a shift to individual responsibility. There was a change of government the

following year and the key tenets that called for widespread structural reform were not seriously taken up for another ten years (Cheyne et al., 1997). The three yearly election cycles in New Zealand are viewed by some commentators (Blank, 1994; Cheyne et al, 1997) as a deterrent to the implementation of social policy which has the potential to significantly curb or constrain citizens' freedom of access to goods and resources. This includes the freedom to access social services, including health services, free of charge (Blank, 1994).

IMPACT OF THE CHANGING DIRECTION OF SOCIAL POLICY ON HEALTH SERVICES:

Reigning in the professions.

The change in government following the release of the White Paper (1974) did not seem to lessen the focus on developing strategies to deal with the impact on New Zealand's economy of the United Kingdom joining the EEC in 1973. This period saw the development of revisionist economic policy (Boston et al., 1992). There was a shift in focus from institutional to individual responsibility in social policy, impacting on all social services including health. However, a more incremental approach was made to cost containment than that recommended in the White Paper (1994).

The emergence of managers and administrators within the health sector could be interpreted as the first attempts to reign in health professionals and increase individual accountability for the management of publicly funded resources. This environment also highlighted (possibly in some cases unintentionally) such issues as gender imbalances and fostered the development of 'consumerism' as individuals banded together to pursue their perceived rights of access, not just to services, but to influence over the mechanisms of service delivery (Blank, 1994; Cheyne et al., 1997). These activities placed the dominance of traditional professions, particularly medicine, under the spotlight.

By 1977 midwifery in New Zealand had literally and practically been subsumed within nursing by a new Nurses Act (1977). This Act implicitly defined midwifery as 'obstetric nursing' (Pairman, 1998). The philosophy supporting this move underpinned the acceptance of institutionalised childbearing and the 'technical assistant' role (Donley, 1998) expected of the midwife/nurse in the running of an efficient maternity hospital. The unforeseen outcomes of

eliminating 'costly' student intensive apprenticeship learning by the early 1980s and the promotion of the concept of the generic comprehensive nurse who also gained obstetric experience, bought the skilled midwifery workforce to 'its lowest ebb' (Guilliland, 1998:50).

Few nurses gained midwifery registration during the 1980s when midwifery was incorporated into part of an advanced nursing course (Guilliland, 1998). For example, in the 1960s and 70s, the hospital based midwifery 'training' in Christchurch until its demise in 1979, 'trained' forty to fifty registered nurses and some obstetric nurses (who became the equivalent of direct entry midwives), per year. The demise of this programme and the incorporation of pre registration midwifery programmes into part of a one year Advance Diploma in Nursing course, resulted in 6-8 midwifery registrations per year in Christchurch by the end of the 1980s. (Personal knowledge as the midwifery lecturer in this course at the time).

The situation that midwifery found itself in at this time could be interpreted primarily as resulting from attempts to increase efficiency within health services, rather than some sinister attempt to destroy midwifery. Maybe from a manager's perspective, a nurse who is also a midwife, but paid the same as a nurse represents two qualifications for the price of one. The de-hospitalisation of nursing (and midwifery) training would also seem to offer both the opportunity to break down professional hierarchies and shift the cost of training to another budget (vote:education rather than vote: health). Destabilising professional power within institutions would seem to be more likely if pre registration training is carried out by a separate agency, then the student is less likely to enter the workforce enculturated into the system.

Economic Rationalisation: regionalised health services.

In a persistent drive to harness the spending on health services, Area Health Boards Act in 1993 devolved the previously centralised public health service into 14 regional Area Health Boards covering the country. This decentralisation of health funding enabled greater local influence over spending allocation and health initiatives (Boston, Dalziel & St John, 1999) . The main aim was to delegate decision making (which could also be interpreted as rationing) on health service expenditure to a local level. The majority of the board members were voted in during local body elections, enabling a midwife, Karen Guilliland, to obtain a seat on the Canterbury Area Health Board (Guilliland, 1998). This democratisation of health service development provided

midwifery and women with valuable exposure to the politics of health care provision and its associated networking.

While institutionalised health care providers, including midwives, were influenced by regional variations in health service provision, significantly, General Practitioner (GP) funding still remained centralised and uncapped. (Abel, 1997). The maintenance of this nationally consistent centralised system which was not hooked into the institutions, did later work in the favour of midwives when they obtained access to maternity service funding in their own right.

The nursification of midwifery: a profession in crisis.

By 1983 the midwifery workforce crisis precipitated an amendment to the Nurses Act (1977) enabling registered nurses that were not midwives to care for women in childbirth. A possibly unintended product of the 1983 amendment was the interpretation of this amendment in some parts of the country to exclude 'direct entry' midwives from being in charge of a maternity hospital or carrying out home births. This unique practitioner was denied the legal right to practice in settings where they could not be supervised by a registered nurse. Women's choices over both provider and birthplace were reduced overnight in some areas. Cynically this move was viewed as intentional in order to placate the doctors who were requesting more centralised birthing services within institutions to better meet their own training needs (Donley, 1998).

The 1983 Amendment was seen by many as a turning point in the re-emergence of midwifery as a profession separate from nursing (Donley, 1998; Pairman, 1998; Abel 1997). The 'Save the Midwives' consumer group was formed the same year. This group consisted mainly of women who had given birth at home with a midwife in attendance and were committed to supporting the future of home birth.

A growing unease was felt over this period by hospital midwives within the New Zealand Nurses Association (NZNA) which represented their professional and industrial voice. Midwives felt abandoned by their professional advocates for allowing the Amendment (1983) to proceed. A vote of 'no confidence' in the Association was put forward by midwives in 1984. This raised the profile of midwifery within the NZNA and at their conference the following year a remit supporting a separate midwifery education programme was passed and the International

Confederation of Midwives definition of a midwife formally accepted. By 1987 The NZNA Policy Statement on 'Maternal and Infant Nursing' was rewritten to include the concepts of continuity, partnership, midwifery autonomy and preferential employment of midwives in maternity settings (Donley, 1998).

An increase in births during the 1985-90 period (Guilliland, 1998), which exacerbated the impact of a reduced midwifery workforce, enhanced the argument for a midwifery specific education. It was not until 1989 that pre registration midwifery courses for registered nurses, that were not also part of an advance nursing qualification, were established.

This period also saw consumer health groups, which had emerged out of the women's movement in the 60s and 70s, experience a watershed in NZ in 1988 with the Cartwright Inquiry (an investigation into unconsented participation of women in an experiment on non-treatment of cervical lesions). Following this debacle, women's health issues were highlighted by the media in this country. That same year the Midwives section of the NZNA split off into a separate entity and was inaugurated in 1989 as the New Zealand College of Midwives. Consumer support featured prominently in this move, the College recognising their importance by enabling them to obtain equal membership with midwives.

Working in partnership with women, midwives started to become more involved in the development of maternity service strategy. The philosophical underpinnings of the New Zealand College of Midwives (NZCOM) could be identified in the sentiments of a Discussion Paper on Care in Pregnancy and Childbirth (1989) commissioned by the Department of Health Women's Policy Unit that was released the same year. The key tenets were:

- woman centredness,
- continuity of carer across the entire childbearing experience,
- midwifery equality with doctors in maternity care (autonomy and access to funding)
- consumer choice of carer, service setting, home, community or hospital,
- recognition of midwifery is a profession in its own right.

The working party on this document involved 15 women, of whom only 5 were health professionals, two were midwives. This was to mark the beginning of a number of reviews and consensus gathering exercises attempted by government agencies of the day to strategise an

optimal maternity service.

This gradual build up of midwifery strength from 1983 onwards, appeared to solidify midwifery as a professional identity, in turn attracting more midwives to stand up and be counted. The timing of this professional growth was fortuitous. There was a focus on consumer involvement in health care, there was a midwifery workforce crisis, a renaissance occurring in midwifery education, a push for the emergence of alternative health care providers (other than doctors) and a labour government in power over most of this time that supported community focused health services including midwifery.

While the passage of the Nurses Amendment Act through parliament in 1990, enabling midwifery independence from doctors in childbearing and equal access to funding and services, was seen as a crowning achievement for midwives, it was also congruent with social policy goals of the day. The Maternity strategy outlined in the 1989 Discussion Paper on Care in Pregnancy and Childbirth, clearly supported the notion of an autonomous midwifery practitioner.

THE RE-EMERGENCE OF MIDWIFERY INTO A CHANGING HEALTH CARE ENVIRONMENT

The environment in which the Nurses Amendment Act was passed in 1990 was complicated. Nationally there was a growing disenchantment by consumers with the medical profession (Abel, 1997). Midwives had unified in a newly formed national College of Midwives. Increasing numbers of nurses were gaining midwifery registration from 'midwifery only' programmes and there was still an acknowledged shortage of midwives in the face of an increasing birth rate.

The introduction of "The Health Goals and Targets" by the Labour government in 1990 articulated their commitment to increasing the profile of primary health care and public health, including the demedicalisation of some services such as community and maternity (Boston et al., 1998). On another level, there was a female Minister of Health, who had been lobbied over a number of years by key midwifery figures and appeared to have clarity over the midwifery cause (Abel, 1997). The NZCOM president was also an existing Labour representative on an Area Health Board. The Nurses Amendment Bill was passed rapidly through parliament. Urgency in its passage was also heightened by the forthcoming elections and desire to announce its

successful passage by the Minister of Health as a special guest at the first National Conference of the College of Midwives in Dunedin in August of 1990.

The 1990 Nurses Amendment Act, added of three words to the 1977 Nurses Act "or registered midwife". This in turn required changes to five acts and twenty-two sets of regulations and "had a profound effect on the scope of midwifery practice, payment and status" (Abel, 1997p106). Midwives gained the right to prescribe, to order publicly funded medical supplies and access hospitals to provide care to women in childbirth without being needing to become an employee. The maintenance of a nationally consistent government payment system for GPs included the Maternity Benefit Schedule. This enabled midwives to transition onto an existing payment process for services if they chose to take their own maternity clients (whether the midwife was employed or self-employed). Midwives at last had a legal mandate to provide maternity care to women in any setting without requiring medical supervision.

It is estimated that in the first year of legislated autonomy, 50 midwives (3% of the workforce) were practising independently (self-employed) and commenced claiming the Maternity Benefit (Pairman, 1998). Most of these midwives had recently been or were still currently employed by maternity hospitals. The relationship between these midwives and the hospital provided a challenge for managers, doctors and midwifery colleagues. Justifiably midwives argued that if doctors could maintain public employment and privately take on clients, so could midwives. These emergent signs of competition finally triggered action from the medical profession, who had been relatively 'subdued' (Abel, 1997) during the passage of the Nurses Amendment Bill. Abel (1997) contends that they "did not anticipate the extent of the change to the midwifery scope of practice" (1997p105). Because of the intent of the legislation in granting equivalence to midwives with doctors, arrangements that had previously been made for doctors to gain maternity hospital access for the provision of their 'private' (self-employed) service, were also granted to midwives.

A CHANGING CLIMATE IN THE HEALTH SECTOR: THE PLACE OF MIDWIFERY.

The achievement of midwifery autonomy was timely. Shortly after the passing of the Nurses Amendment Act (1990) the Labour Government was replaced by National which clearly had an agenda for change, culminating in drastic restructuring of the health services along market lines

(managed competition) (Blank, 1994). A number of legislative initiatives paved the way for the introduction of these health reforms, most introduced during the term of the previous Labour Government. The Commerce Act (1986) enforced competition law in New Zealand. Such activities as price fixing and controlling of costs that contribute to a price were made illegal (Pearse, 1999). This legislation supported the notion of competition between different providers of the same service. The Public Finance Act (1989) legislated managerialism into the public sector. The focus of government advisors changed. While previously most came from the professions, the new wave emerged from financial and economic backgrounds. The use of international consultancy firms started to flourish. Collaborative facilitated discussions around health needs and strategies commenced, with the medical advisors 'opinions' being one of many (Blank, 1994; Kelsey, J 1993; Cheyne et al., 1997).

Cheyenne et al (1997) noted that the traditional basis of expertise was also being questioned at the time in other social services. Both vote:education and vote:social welfare had commenced 'encouraging more alternative and non traditional providers' (Cheyne et al., 1997 p 180). The Children and Young Persons and their Families Act (1989) shifted responsibilities previously invested in 'experts', to family and community agencies (Cheyne et al., 1997). The Health Goals and Targets produced by the Labour Government in 1990 increased the focus on primary health and wellness. Some commentators believe that this document set the scene for demedicalisation of some health services (Kelsey, J 1993; Cheyne et al., 1997). It was within this environment that the 1990 Nurses Amendment Act was passed. .

By 1991 the new National Government released a Green and White paper on health, which outlined proposed health reforms which clearly mirrored the recommendations made in the 1974 report on 'A Health Service For New Zealand' (Blank, 1994; Kelsey, J 1993; Cheyne et al., 1997). The proposals outlined in the Green and White Paper (1991) were largely taken up by the time legislation was passed enshrining the changes through the Health and Disability Services Act (1993). This legislation effectively broke up the health system in New Zealand, not only geographically, but also split the funder from the service provider role, setting the scene for competitive contracting for services. The objectives of the health reforms were to improve efficiency, access, choice, flexibility and accountability of health services to the consumer, the public, who indirectly funded them. Health services were to be run on a business model under

the direction of appointed Boards (Blank, 1994; Cheyne et al., 1997).

The disarray of health services that occurred between the release of the Green and White Paper in 1991 and the establishment of the reformed health service in 1993 appeared to advantage midwifery. By 1991 most midwives were new to self-employment and with no precedents set as to how health services should 'manage' them, the equity with GPs in maternity would seem an easy way out. To place midwifery in perspective, in 1991 there was a combined medical, nursing and midwifery workforce of 39,014 (NZHIS workforce statistics 2001) and an estimated 50 midwives in independent practice claiming from the Maternity Benefit Schedule (Pairman, 1998). It is possible that midwifery was not seen as a significant threat given the upheaval in the health sector generally at the time.

In 1992 a Maternity Services Tribunal was called. It was believed to have been instigated in response to the claim that midwives were 'blowing out the maternity budget' (Donley, 1998 p19). With midwives pitted against doctors who claimed that their should be a separate payment schedule for midwives and doctors, a decision was made that the 'fee was for a service of equal value' (Donley, 1998 p 19). In 1993 Maternity Services Tribunal decision was enshrined in Section 51 of the Health and Disability Services Act (1993). Midwives retained their equity with doctors for remuneration which, although challenged regularly over the following 3 years, remained in tact during that time.

At the same period that the Maternity Tribunal was held, a National Advisory Committee on Core health services was established. The mission of this Committee was to decide what services should be funded publicly (core services) and which services consumers should pay for privately (Cheyne et al., 1997). In line with this directive and in an effort to make sense of maternity service provision within the new health climate as a whole, two key reports were produced in the following year. These were 'First steps towards an integrated maternity services framework' (1993) by Coopers and Lybrand and 'Care of the mother and baby after normal delivery' (1993), a consensus workshop report to the National Advisory Committee on Core Health and Disability Support Services. Between them, they recommended essential structures, policies and processes to do with childbearing should be funded publicly and that there should be national consistency in self-employed midwives' and doctors' payment. Subsequently a great deal of midwives time

was spent negotiating with funding bodies to ensure payment equity for midwives with doctors for services in childbirth was maintained.

MIDWIFERY WITHIN A CONTRACTUAL ENVIRONMENT

A slowing down of the health reforms occurred in 1996 as a new coalition government called for a review of progress. The funder provider split had not provided the savings and quality anticipated (Boston, et al., 1999). The general practitioners had formed themselves into Practitioner Organisations , which provided them with a collective bargaining voice and budget holding as a means of buffering the impact on individual practitioners of competition. It was at this point that clarification over the framework for new modular maternity system was arrived at. A new Section 51 Advice Notice to the Health and Disability Services Act (1993) was issued by the Regional Health Authorities in 1996. This Notice required one named lead practitioner (midwife or doctor) for each pregnant woman, effectively rejecting the desire of doctors for a separate medical maternity schedule and stiffening the competition between the two providers to claim the dollars that went with the role of Lead Maternity Carer (LMC). With increasing midwives turning to independent practice in the role of Lead Maternity Carer, doctors increasingly sought midwifery care from employed midwives by negotiating arrangements with hospitals. Doctors gained an advantage in these negotiations through the development of Independent Provider Organisations (IPOs) which represented a number of practitioners and presented a greater fiscal advantage for hospitals. These groups also went on to successfully negotiate with the Regional Health Authorities for variations to the standard Section 51 Notice, giving their members a sometimes significant financial advantage over midwives who were accessing the standard Section 51.

The New Zealand College of Midwives, reading the political and commercial environment, initiated the establishment of a Midwifery and Maternity Provider Organisation (MPO) in the 1997. With a vision, during developmental stages, of national coverage, it finally emerged as a South Island venture, contracted to the National Health Funding Authority and a separate entity from the College. The MMPO is one of many IPOs throughout the country that self-employed midwives have chosen to join. Most other IPOs have multi professional membership and are headed by medical practitioners. Many of these organisations obtain funding directly from the Ministry of Health, then disperse it to practitioners as negotiated. At the time of writing the

MMPO has midwife members birthing about one fifth of women in the South Island of New Zealand.

With a further reorganisation of New Zealand's health sector currently taking place, midwifery faces yet another hurdle in maintaining its autonomy as a profession. The current fragmentation of the midwifery voice through membership of multidisciplinary IPOs will be further fragmented with the coming formation of twenty-one District Health Boards. Lack of long term clarity at present over how midwifery will be funded nationally (or regionally), does not enable visioning, at this point, as to how midwifery will overcome this challenge, but we can learn from strategies that have been successful in the past.

CONCLUSION

Midwifery services in New Zealand, have been responsive to a variety of social policy initiatives over the last sixty years. From a relatively independent existence in the earlier part of the century (Donley, 1998) midwifery became increasingly subsumed into the health sector as hospitalised childbirth became increasingly popular and available from the 1920s onwards. The formation of the social welfare system in 1938 established maternity services under the umbrella of 'health' and from then on midwives and maternity care remained at the whim of every social policy initiative that impacted on hospitals. The subtle and incidental erosion of midwifery as a profession distinct from nursing reached a point in 1977 when the term 'obstetric nurse' legally defined the role of a midwife.

A turning point for the midwifery profession occurred following the 1983 Amendment to the Nurses Act (1977), which effectively subordinated midwifery to nursing (Abel, 1997). Midwives chose to break away from their nursing colleagues and went on to form their own College in 1989. The power of the women's health consumer movement and the democratisation of the political environment at the time must be seen as a key force in achieving this milestone. In other sectors of society at the time, social movements were being formed and people were standing up to be counted.

Midwifery autonomy was achieved through an amendment to the 1977 Nurses Act in 1990. This professionally liberating move was in reality the reflection of a more fundamental shift in

health policy direction at the time, the result of astute positioning of the profession and the culmination of relationship development at the highest level by politically aware midwives. The opportunity presented itself and midwives were ready and prepared to take advantage (ride the wave).

The actual impact of this development could not really be seen with clarity at the time, but events quickly unfolded which seemed to give midwifery leaders an indication of the fact that the battle was not over. Midwives found themselves in direct competition with doctors for clients. The complexity of midwives plight was complicated by the fact that three years later the entire health sector was pushed into competition by the Health and Disability Services Act (1993). It could be argued that the preparation that midwives underwent to achieve autonomy in 1990 and the first few years of experiencing the reality of competition, positioned them well to tactically manage their way through the middle part of the 1990s.

Ten years following their landmark legislation, midwives in New Zealand find themselves repositioned within the health sector and facing perhaps an even greater challenge than ever before. The reformation of self employed midwives into IPOs with other health professionals may act to dissipate the consciousness raising necessary to work collectively through the next set of health reforms we are currently experiencing.

The role of the New Zealand College of Midwives cannot be under estimated in this entire process. The collective wisdom of midwives nationally can be viewed as a key strategy in negotiating our way through a very complex health care environment in New Zealand. The concepts of networking, mechanisms for allowing dissenting voices to be heard (for example, at workshops and National Committee meetings), achieving national representation and fostering consumer participation appear to have been successfully facilitated by the College over the last 12 years.

In summary, the learning for midwives that could be achieved by reflecting on our achievements over the last 10 years include the following; change is constant, it allows our profession to evolve. Change is a mechanism we use to evolve and adapt to exist within our environment or we could risk extinction. Communication fuels adaptation. We need to listen to dissenting

voices as well as supporting ones in order to clarify our position (and threats) within our environment. Midwives and midwifery do not (cannot) exist in isolation from the rest of the health system. We are influenced by and can have influence on the environment we work and live in. Knowledge of our history provides us with the potential to develop strategies for our future.

REFERENCES

Abel, S. (1997) Midwifery and maternity services in transition: an examination of change following the Nurses Amendment Act 1990 Auckland PHD thesis. University of Auckland.

Blank, R. (1994) New Zealand and health policy. Oxford Readings in New Zealand Politics Auckland: Oxford University Press.

Boston, .J. (1992) Redesigning New Zealand's welfare state. The decent society? Essays in response to National's social and economic policies pp. 1-18 ed. J Boston and P Dalzeil. Auckland: University Press.

Boston, J., Dalziel, P & St John, S. (1999) Redesigning the welfare state in New Zealand:problems, policies. Auckland: Oxford University Press,

Cheyenne, C., O'Brien, M., Belgrade, M., and (1997) **Social** policy in Aotearoa New Zealand: a critical introduction. Auckland: Oxford University Press.

Coopers & Lybrand (1993) First steps towards an integrated maternity services framework. Wellington

Donley, J. (1998) Birthrites: Natural vs Unnatural Childbirth in New Zealand. Auckland:
The Full Court Press.

Donley, J. (1998) A response to the New Zealand Nurses Organisation New Zealand College of Midwives Journal Issue 19:18-19

Fougere.G, (1992) The state and health care reform in New Zealand Health and Hospital July/August: pp.14-20

Guilliland, K. (1998) A Demographic profile of independent (self-employed)

midwives in New Zealand Aotearoa. Wellington : Thesis for Masters of Arts in Midwifery. Victoria University.

Kelsey, J. (1993) Rolling back the state Wellington: Bridget Williams Books

National Advisory Committee on Core Health and Disability Services (1993) Care of mother and baby after normal delivery Wellington

New Zealand Health Information Service (2001) New Zealand Workforce Statistics 2000 Retrieved 10.7. 01 http://www.nzhis.govt.nz/stats/medpracstats.html

Pairman, S. (1998) The Midwifery Partnership: An Exploration of the Midwife/Woman Relationship. Wellington : Thesis for Masters of Arts in Midwifery. Victoria University.

Pearse. J. (1999) Be aware of price fixing risks. New Zealand College of Midwives Journal Issue 20:23-24

Appendix Seven

Paper developed from Part Four of this portfolio, 'The organisation of maternity care by midwives in rural localities within the South Island of New Zealand', published in the New Zealand College of Midwives Journal (28) April 2003

THE ORGANISATION OF MATERNITY SERVICES BY MIDWIVES IN RURAL LOCALITIES WITHIN THE SOUTH ISLAND OF NEW ZEALAND

BACKGROUND

At the time of this study (September 2001) there were twenty-one primary maternity facilities (meaning hospitals or birthing units) in the South Island of New Zealand, located within rural towns. None of these facilities provide for caesarean sections. Sixteen of the facilities were located more than 60 minutes from a secondary or tertiary maternity facility (HFA, 2000). The nine rural facilities scanned for this study accounted for about a third of the primary facility births and 66.9% of rural facility births in the South Island. The scan was carried out as part of a midwifery doctoral study into the organisation of maternity services in rural localities by midwives.

Table 1 Place of birth in the South Island of New Zealand 1999 (MoH, 2001)

Place of birth in the South Island (SI)	Number of facilities	1999	1999 (% of all South Island Births)
Births in tertiary obstetric units	2	5462	51.31
Births in secondary maternity hospital	7	4246	39.89
Births in primary and rural facilities[1]	21	937	8.8
Total births	**30**	**10645**	**100**
Births in rural primary facilities*.	16	468	50% of SI primary births
Births in the study group facilities	9	313	66.9% of SI rural facility births

** Primary facilities60 minutes or more from a secondary or tertiary obstetric facility.*

METHODOLOGY

In August 2001 midwives providing services around nine rural maternity facilities from three District Health Boards (DHBs) in the South Island of New Zealand contributed information for a contextual scan (based on the concept of environmental scanning

[1] One of the services in the study was omitted in the MoH '1999 Report on Maternity' Their 33 births for 1999 have been included in this total.

(Correia & Wilson 2001)) of maternity service provision within each of their localities. These scans were then amalgamated to provide an indication of the issues facing maternity service provision by midwives within the context of the rural South Island. First, a scan questionnaire was sent out, then the researcher visited each facility to meet the midwives and complete the questionnaire with them.

The four main components of the scan process included:

- the development of a broad description of the maternity services provided within the locality
- a profile of the community in which the facility and service was located
- a profile of the local health services provision issues
- identification of threats and opportunities impacting on the future of the maternity services

Following the researcher's visit, the individual scan results were returned to the informants who reviewed and corrected the findings and contributed to a set of draft strategies for the further development of their service. The scan profiles of each service locality and its context were then used to collectively identify key issues that seemed to have the potential to influence the survival and enhancement of the rural maternity services.

Ethical approval for the research was obtained through the University of Technology Sydney's Ethics Committee. A copy of this was then lodged, as requested, with the NZ Ministry of Health Ethics Committee.

SCAN FINDINGS

RURAL MATERNITY SERVICES

<u>Service locations:</u>

All of the birthing facilities were located within provincial towns with catchment populations of 5000 - 20000 people. All the facilities were located 1 to 1.5 hours road travelling time from a secondary or tertiary maternity facility. Transfer processes increased the distance by at least 30 minutes. Most were spaced at least 60 minutes from another rural maternity facility.

Maternity facilities:

Seven of the maternity services were located within 10-15 bed community hospitals in maternity 'wings' consisting of 3-4 postnatal beds and 1-2 birthing rooms. One of the facilities was identified as a Birthing Unit that was midwifery owned and managed. The other service was located within a rural hospital that had reduced its beds to provide only maternity services. Two of the facilities were owned and managed by a base maternity hospital, while six were owned by a community trust and one by a midwife. Three of the trust owned community hospitals were in need of considerable upgrading. All the facilities employed midwives and nurses to staff their maternity service. Employed midwives in five facilities had well established midwifery Lead Maternity Carer (LMC) services (where the midwife takes total responsibility for the clinical management of the woman's pregnancy, birth and postnatal care).

Volume of maternity activities:

The total births per facility ranged from 10 to 91 per year, with an average annual birth rate of 35 births per facility. The combined total births in the South Island for 1999 (MOH, 2001) was 10645 with 937 (8.8%) occurring in primary and rural facilities with no obstetric back up or caesarian section facilities. Of these 937 births, 468 occurred in primary maternity facilities 60 minutes or further from a secondary or tertiary maternity facility in 1999 (see table 1& 2). The facilities scanned, provided a venue for 67% of all the rural births in the South Island in 1999.

Table 2 Volume of maternity activities and outcomes for the nine rural services in 1999, compared with national volumes. (MoH, 2001)

Facility	Normal Births	Breech	Forceps	Vacuum extraction	Induction	episiotonmy	Still births
1	26	1					
2	30	2	1			2	
3	91			1	5	3	
4	21		3		1	6	
5	55		11		11	13	
6	10						
7	33						
8	13						
9	15			1			
Total	**294**	**4 (1.2%)**	**15 (4.8%)**	**2 (0.6%)**	**17 (5.4%)**	**24 (7.6%)**	**0 (0%)**
All 55 primary Facilities	5882[2]	22 (0.3%)	97 (1.6%)	160 (2.6%)	592 (9.6%)	316 (5.1%)	3 (0.04%)
NZ total rates for all facilities	36582	468 (.9%)	2801 (5.3%)	2559 (4.8%)	13480 (27.7%)	5136 (12.4%)	440 (8.2%)

Midwifery Lead Maternity Carer (LMC) Services

Overall about 60% of all births within these facilities had midwifery LMCs, three facilities had 100% midwifery LMCs. By January 2003 the midwives estimate that all but one facility will have 100% LMC midwife births. Up until July 2001 employed midwives in four facilities did not provide midwifery LMC services but provided midwifery care for General Practitioner LMCs.

Home birth services were mainly provided by self employed midwives within the catchment area of five of the facilities. These midwives also accessed these facilities to birth women. Four facilities were totally reliant on employed midwives to provide all the community midwifery services. Only three facilities had employed midwives who offered

[2] This does not include the 261 primary births wrongly coded as caesarean sections (MoH, 2001:32)

home birth as an option. All the employed midwife informants expressed a conflict between trying to maintain viability of their facility and offering home birth.

Medical LMC Services

Over the 12 months prior to the scan, general practitioner LMCs attended an average of 40% of births in the facilities under study. Midwives reported that GP LMCs were choosing to exit provision of maternity services in the rural facilities by December 2001.

Five facilities provided a location for regular obstetric clinics. The obstetricians and 'their midwives' visited up to fortnightly, from two base maternity hospitals and one private obstetric service. Midwives reported that these clinics enlisted 'low risk' women to birth away from the local maternity facility. Most of these obstetricians relied on local general practitioners to provide some of the antenatal care and local independent midwives to provide the postnatal care.

Pregnancy and parenting programmes

Seven facilities provided these services. Plunket and Parents Centre also offered programmes. There seemed to be little collaboration between the local midwives and these providers.

Postnatal transfer back to the rural facility

An average of 33% (range 14% to 60%) of admissions to the facilities were women needing postnatal care following birth elsewhere. These women tended to stay about a day longer than women who birthed in the facility.

Midwifery co-ordination of facilities

Three of the facilities had an established midwife co-ordinator or a midwife manager role, two facilities had some hours per week allocated for the functions. Within the six months prior to the scan, and three facilities had allocated a midwifery LMC establishment role to an employed midwife. Two of these roles were for 12 month contracts. . The remaining three facilities did not have a designated midwife co-ordinator and the service management was informally taken on by one of the midwives. Two of

these latter services had hospital managers supporting their employed midwives to establish midwifery LMC services.

Management and monitoring of maternity services

Only one of the facilities had a formalised process in place to monitor the activities of the maternity facility, other than the 'birth book', which recorded each specific admission. No overview summary was developed and few facilities had formalised 'booking' processes which enabled them to forecast their workload. The activity data for the scan was provided after the scan visit on a form created by the researcher specifically for the facilities.

Only two facilities appeared to have in place systems for monitoring midwifery activities, including individual midwives' caseloads. Because some facilities were just establishing their midwifery LMC services with employed midwives there was poor forecasting data on which to estimate the actual midwives required. Only one facility had an arranged caseload limit for employed midwives.

There appeared to be 22.5 full time equivalent employed (FTE)[3] midwives between all the facilities (2 FTE were planning to leave in the following 3 months). The existing FTE level would calculates at 1 FTE employed midwife per 20 births in these facilities. With postnatal women included in the total, each FTE midwife would care for an average of 34 women per year. These employed midwives cared for about 774 inpat e t admissions per year, with an average day stay of 3.5 days or 2709 bed days (according to the scan informants). This type of data does not appear to be collected or analysed by the midwives or their managers to project and manage the midwifery and maternity workforce in these settings

Facility maternity back up services

Karitane nurses, Obstetric Nurses, Enrolled nurses, Registered nurses and hospital aids were available 'on call' in seven of the facilities to support the midwives provide 24

[3] The actual FTE status was difficult to determine. Some midwives claimed overtime for excess hours while others saw themselves as full time when sharing a position with a colleague. -

hour cover when a woman was in the facility. Two of the facilities relied on the midwife to carry out routine cleaning and provide meals. The midwives in four of the facilities were transferring from a 'core' facility role to an LMC role, which means they will become more involved in the co-ordination of the whole maternity service than previously. They were aware that they needed to shift their focus from facility to community maternity service provision. This would include managing the logistics of midwifery coverage of the facility for independent midwives (who all required facility midwives as back up), midwifery care for GP LMCs and midwifery back up for each other.

Self employed midwives

The informants indicated that there were in total 10 self employed midwives providing services within the catchment area of five of the facilities (four facilities had no self employed midwives working in the locality) . The self employed midwives provided most of the home birth and some facility births. The FTE status of these midwives was not able to be calculated, but many appeared to take a heavy caseload because they also provided antenatal and postnatal home based care for women birthing out of the locality. This work was building as GPs were withdrawing, recommending women birth at the base hospital 'just in case'.

Medical services

Three facilities did not have GP LMC services. Most of the GPs providing LMC services in another four facilities had chosen to cease providing this service within the following 6-12 months following the scan. This was the key reason that the employed midwives were beginning to offer local women LMC services to birth in their facilities.

While obstetricians regularly visited four facilities to carry out their clinics, none would provide services directly to the facility. Over the previous 12 months only one facility had a forceps delivery and none offered epidural or caesarian sections. Inductions were rarely carried out.

Referral and support services

Five of the facilities were located within 2 hours of an obstetric referral hospital and the other four are within 60 minutes road traveling time. Six facilities had weather dependent road transfer facilities and needed to rely on air transfer at times in winter. Because of the lack of proximity to an ambulance, some facilities needed to add up to an extra hour to transfer times to the secondary facility. All the facility midwives indicated that they had excellent relationships with obstetricians at the secondary facilities. There were strategies they had developed to enhance this, including attending study days on site and visiting the base hospital when in town.

Eight facilities had regular ultrasound and laboratory services. The midwives had a good relationship with the district and Plunket nurses. The relationships with practice nurses and general practitioners were less well developed. This was mainly due to the historical preference of these practitioners for referring all pregnant women to the secondary maternity service via the visiting obstetric clinics. This enabled the GP to retain the antenatal and postnatal LMC funding. Facilities with the best relationships with GPs were those where the GPs did not practice obstetrics and referred women to the midwives for their initial assessment and birth options.

THE COMMUNITIES

Eight of the facilities were located within the lower half of the South Island. The other facility was located in the top part of the Island. All the communities were rural with high tourist populations and associated service industries. All but three had seasonal population fluctuations. All the southern communities were experiencing population growth with the new dairy industry which had led to an increase in maternity service requirements because this industry brought new, young families intothe area.

Geographic features

The maternity services provided from most of the facilities covered a radius of 1-1.5 hours. Midwives traveled great distances for home visiting. In winter the roads around seven of the facility catchments were affected by ice and snow. Generally the roads to the base facility, for all but one service, were straight and well maintained.

Public transport was very infrequent and costly. Women had to find their own transport if they need to travel to the facilities, therefore, the midwives believed they did more home visiting, unless the woman were regularly coming to town for shopping.

Sociocultural profile

Midwife informants consistently described the population as consisting of two distinct socioeconomic groups. There were the service workers and social welfare beneficiaries who lived in transient low cost accommodation and most had young families. Then there were the farming families and business owners who were older with children away at school or tertiary institutions. Midwives noticed an increase in women with complex social problems particularly associated with drug and alcohol abuse. Many midwives felt ill equipped to support these women. Many new families moving into the southern facility areas with the dairy industry had no family supports.

Consumer support for the services

All informants indicated that word of mouth was the main means women had of learning about the local maternity facility service. All facilities had developed brochures and one also had a website. One facility (the midwifery owned birthing unit) actively involved women in developing and directly promoting the service.

Political environment around maternity service provision

In all but two localities most rural women traveled to the secondary hospital to birth. Midwife informants believed that competition for the LMC role antenatally between doctors and midwives contributed to this. While the doctors were withdrawing from birthing women locally, they appeared to be continuing to provide antenatal and postnatal LMC services whilst referring women to the secondary facility to birth. Women who wanted continuity of midwifery care, had to seek out a midwife themselves. The perception of risk associated with a local birth was believed to be perpetuated by the information given to women on confirmation of their pregnancy test by the practice nurse and/or GP.

Four facilities were at risk of closure if the volume of births had not increased. The two facilities which had a steady volume of births, both engage in community information and publicity about their service. The midwives had become personally recognisable in their communities. They had established clear relationships with the GPs which identified midwives and their facility as the prime maternity service providers in the locality.

RURAL MATERNITY SERVICE DEVELOPMENT

Facility design

Six of the maternity services were located within new or refurbished facilities. Two of the new facilities had been poorly designed, without recognising the implications of providing a midwifery LMC service from the facility. Four of the facilities had the maternity beds close to other services, which enabled the midwife to access nursing support or cover when a woman was staying postnatally. Two facilities had their maternity beds isolated a distance from the rest of the hospital which necessitated a staff member staying close by when a woman was in over night. Five facilities had altered their postnatal room furniture to encourage the partner and/or family to stay overnight.

All the facilities, other than the birthing unit, had birthing rooms separate from the postnatal rooms. Some of the facilities retained the original obstetric delivery theatres, in which women were expected to birth. Two facilities had water birthing and another offered a labouring pool. The other facilities had conventional baths that women used in labour.

Technology

None of the facilities had a maternity dedicated computer to store data or access the internet. Only two facilities had access to a computer for the midwives.

Interprofessional co-operation

All midwives clearly viewed themselves as being part of the community's maternity service even though seven facilities were located within community hospitals that also

have aged care and rehabilitation beds. None of the midwives in these facilities were expected to undertake nursing roles, but nurses were expected to back up maternity service when women were staying over night. The midwives indicated they had a harmonious relationship with the facility nurses, but experienced tension at times with hospital managers who had little understanding of the complexity of providing midwifery LMC services while providing back up midwifery care in the facility.

Facilities with exclusive midwifery LMC services appeared to have more harmonious relationships with local general practitioners (GPs). The localities where GPs continued to take an LMC role experienced most difficulties in maintaining constructive relationships. Communication difficulties appeared to centre on expectations that GPs had of facility midwives. Poor quality booking information and late contact with the midwife made co-ordination of care difficult. Relationships between practice nurses and midwives did not appear to be well developed.

While seven facilities formed a network of maternity services which bordered on each other, the midwives had little contact with each other. Most had not visited the other facilities. There was not an effective rural midwifery network other than that developed when midwives attended midwifery updates at either the base facility or the tertiary facility, which seemed to occur on an annual basis.

Midwifery professional development

All of the midwives in the facilities scanned were members of the New Zealand College of Midwives and indicated that they relied heavily upon the College for advice and support. The midwives working in the community trust facilities were most reliant on the College and were increasingly using the Midwifery and Maternity Provider Organisation (an independent provider organisation linked to the College of Midwives) for claiming LMC payments and providing practice management advice.

Continuing education

All facility midwives undertook annual updates in infant resuscitation, cannulation, pharmacology, emergency care and other clinically based topics. Most were run by the secondary facilities or the polytechnic.

Postgraduate study

Only three facilities had a midwife involved in postgraduate study. Midwives cited cost as the main factor inhibiting pursuit of further education.[4] These costs included:

- long distance travel to the venue (few live within daily commuting distance from a polytechnic or a centrally located venue)
- accommodation during the seminar/course
- loss of earnings for independent midwives and cost of replacement staffing for employed midwives
- childcare/family care arrangements while away

Midwives indicated an interest in a postgraduate programme that encouraged networking, knowledge sharing and opportunities for rural midwives to develop their services.

STRATEGIES FOR STRENGTHENING MATERNITY SERVICES IN RURAL LOCATIONS

Findings from this scan have led to the development of strategies for enhancing and strengthening maternity services run by midwives located in rural and isolated settings. The maintenance of these rural primary facilities appears to be contingent upon support for the development of the local midwifery LMC services.

The following recommendations have emerged from the scan process and have been agreed to by the midwifery participants of the scan.

1. **Encourage and enable women to use their local maternity service**
   - develop local support networks for rural maternity services

[4] Following the scan Otago Polytechnic introduced a rural paper in their midwifery masters programme. A number of midwives from these facilities are now enrolled in postgraduate study. A proposal to the Clinical Training Agency to fund this was declined. Other sources of funding continue to be investigated.

- encourage women to actively support their local maternity service
- provide information on local maternity services
- inform local medical practitioners and practice nurses of the midwifery LMC role

2. **Professional development for rural midwives**
   - provide regular midwifery practice updates
   - develop a postgraduate midwifery programme for rural midwives

3. **Support the transition to provision of LMC services**
   - develop rural maternity facility management systems
   - identify ways to manage maternity facility workforce

4. **Development of locum service**
   - identify practitioners willing to locum in rural areas, e.g. midwifery lecturers
   - co-ordinate leave to match locum availability

5. **Analysis of maternity workforce**
   - scan the workforce profile and projected requirements over the next 5 years

6. **Development of a rural midwifery network**
   - set up a formal process for linking rural midwifery providers in the South Island
   - enable the network to have a tangible influence on the development and maintenance of maternity and midwifery services within the rural setting.

RISKS OF NOT SUPPORTING MIDWIVES PROVIDING LOCAL RURAL MATERNITY SERVICES.

The scan indicated that midwives were attempting to strengthen and develop the services they offer to rural women within their localities. Most were hopeful of increasing the birthing volumes once the GPs left maternity services to midwives. It would, however, seem likely that without immediate support for these midwives and the service they

provide, a number of these rural facilities risk closure by the DHBs within the next 12 – 18 months.

Closure of rural maternity facilities will probably result in midwives leaving the district, because the volume of antenatal and postnatal care services they will be left to provide for women forced to birth in the cities, will be insufficient to provide them with a livelihood. Midwifery will again become invisible in rural settings without the small facilities as a focal point for birth. Midwives have indicated a desire to provide continuity of midwifery care for rural women within their own locality, the only way to achieve this is to support the development of midwifery LMC services in these settings.

REFERENCES

Correia, Z. Wilson, T. (2001) Scanning the business environment for information: a grounded theory approach in **Information research** vol 2:4 http://InformationR.net/ir/2-4/paper21.html

Health Funding Authority (2000) **Maternity services: a reference document.** HFA NZ Wellington

Ministry of Health (2001) **Report on maternity 1999.** MOH NZ Wellington