THE IMPACT OF THE RURAL HOSPITAL MEDICINE VOCATIONAL SCOPE ON THE HOKIANGA HEALTH SERVICE

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Abstract

Introduction and Aim

Rural Hospital Medicine was recognised in New Zealand as a vocational scope of medical practice in 2008. The intention was to provide recognised standards of training and professional development for doctors working in rural hospitals and to encourage quality systems to become established in rural hospitals.

Hokianga Health is an integrated community owned health service including a hospital in the far north of New Zealand, serving a rural Māori community.

The aim of this thesis was to explore the impact of the Rural Hospital Medicine scope at Hokianga Health.

Methods

A case study design using qualitative methods comprising a document analysis and interviews was chosen. A thematic analysis of key documents tracking change and development at Hokianga Health was undertaken. Twenty-six documents (ten internal and sixteen external to Hokianga Health) were included.

Eleven individual semi-structured interviews were undertaken with past and present employees of Hokianga: eight were medical practitioners, three were senior non-medical staff. The interview explored the participant’s view of the Rural Hospital Medicine scope of practice. Interviews were recorded and transcribed. Thematic analysis of the interviews was undertaken.

The two data sources were analysed separately followed by a process of convergence and corroboration of findings.

Results

Before 2008 there was a mismatch between the scope of medicine practiced at Hokianga and available medical training and professional development programmes: the hospital aspect of practice fell outside the General Practice scope. This created a vulnerability for individual practitioners and the hospital service.
The Rural Hospital Medicine scope brought a specific focus to hospital practice and thus validation of this aspect of the medical practitioners’ work.

The Rural Hospital Medicine and General Practice scopes together provided the right fit for medical practice at Hokianga.

The strengthening of clinical practice and improved scope of services resulting from the alignment with Rural Hospital Medicine and the associated rural hospital regulatory policy, systems and processes, strengthened clinical safety and thus the viability of the hospital service.

The Rural Hospital Medicine movement also strengthened Hokianga Health’s external strategic alliances helping to create a sense of belonging, and facilitating alignment with the changing external regulatory environment including nomenclature.

Challenges resulting from the Rural Hospital Medicine scope at the individual practitioner level mirrored those at the health service level: rural practitioners and the rural hospital service attempting to deliver to regulatory systems and processes that had not been set up with their scope of practice and model of care in mind.

**Conclusions**

The new vocational scope of Rural Hospital Medicine enabled the strengthening of both clinical practice and wider quality systems and standards at Hokianga Hospital, thus meeting the intentions of the new scope. In highlighting wider challenges to rural health the study supports the notion that New Zealand implements a process of rural health impact assessment. Though focused on one rural health service, findings are applicable to other rural health services in New Zealand and internationally.
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Abbreviations

ACRRM  Australian College of Rural and Remote Medicine
CME  Continuing Medical Education
DHB  District Health Board
DRHMNZ Division of Rural Hospital Medicine New Zealand
GP  General Practitioner
HHET  Hokianga Health Enterprise Trust
IMG  International Medical Graduate
MCNZ  Medical Council of New Zealand
MOSS  Medical Officer of Special Scale
NDHB  Northland District Health Board
NZ  New Zealand
PHO  Primary Health Organisation
RGPN  Rural General Practice Network
RHM  Rural Hospital Medicine
RNZCGP  Royal New Zealand College of General Practitioners
SMA  Special Medical Area
WONCA  World Organisation of Family Doctors

People

TS  Professor Tim Stokes, Department of General Practice, Dunedin School of Medicine.
SD  Professor Susan Dovey, Department of General Practice, Dunedin School of Medicine.
KB  Dr Katharina Blattner, Principal Investigator, Department of General Practice and Rural Health, Dunedin School of Medicine.
Chapter 1
Introduction

1.1 Study aim and objectives

Rural Hospital Medicine (RHM) was established in New Zealand (NZ) as a new scope of medical practice with its own vocational training programme in 2008. (1) This was seen as a solution to the rural medical workforce shortage and one which would ultimately improve rural health care for New Zealanders. While two national rural medical workforce surveys in 2009 and 2015 provided baseline information for future evaluation of the RHM scope and useful information for the wider sector involved in workforce planning, the surveys’ authors recommended further research evaluating the actual impact of the RHM scope in specific rural settings with differing models of care. (2, 3)

There has been no other research evaluating the RHM scope’s impact to date.

The aim of this thesis was to explore the impact of the RHM scope in one rural health service, Hokianga Health in NZ’s far north, to establish whether the scope had met its intentions in this place and whether there had been any unintended consequences as a result of the scope’s implementation.

The objectives were:

1. To review relevant documents to explore the impact of the scope of RHM at Hokianga Health.

2. To explore in-depth perspectives of Hokianga Health’s medical staff and key non-medical staff on the impact on Hokianga Health services of the RHM scope.

The study was also expected to provide insights into the more general question of how decisions and policies concerning rural places and communities made in large urban-based institutions might impact on those same places and communities.

Though focused on one place and its health service, the study findings were expected to have relevance to other rural hospitals and rural health services elsewhere in NZ and internationally.

In the next section of the introduction the history and background of the development and establishment of the RHM scope is presented.
1.2 The development of Rural Hospital Medicine

*It is the common experience of people living in rural communities that major administrative and planning decisions concerning themselves are made ... in the city by people with little or no experience of living or working in rural areas.* (4 p7)

1.2.1 Rural health

People living in rural and remote areas, both in NZ and overseas, have poorer health status than their urban counterparts and poorer access to health care. (5-9) The challenges of rural practice as well as the workforce issues for rural practitioners are well documented. (10-15) Access has been described as a major issue for rural health both in NZ and the world over with the majority of resources concentrated in urban areas, transport and communication difficulties between rural and urban areas and serious workforce shortages of healthcare workers in rural areas. (6, 9, 16-18) Boundaries between primary and secondary health care necessarily become more blurred the further the distance from urban centres where specialist and diagnostic resources are concentrated. Rural communities need access to a wide spectrum of health services including primary and secondary, acute and chronic, and hospital and community based care. Rural medical practitioners provide a wide range of services at primary, secondary and tertiary care level that in urban settings are provided by medical specialists and a range of other health professionals. (4, 12, 15, 19, 20)

1.2.2 Medical scopes of practice

A medical scope of practice is the range of responsibility within which doctors are permitted to practice. It is determined by the patients the doctor cares for, the procedures performed, the treatments provided, and the practice environment. (21) The Medical Council of New Zealand (MCNZ) is the body which, under the Health Practitioners Competence Assurance Act 2003, defines these scopes of practice in NZ. Medical practitioners in NZ can practice either as vocational registrants in a recognised medical specialty or as general registrants (this latter group having undergone no vocational training programme and having no affiliation with a professional college). (21)

1.2.3 Rural hospitals in New Zealand

Before 1999 there was no official definition of a rural hospital in NZ, although various terms were used to refer to these facilities in Ministry of Health documents, for example: health
centres with beds; GP beds; subacute units.(22, 23) Rural hospitals were staffed by a combination of specialists, general practitioners (GPs) and general registrant medical officers also known as Medical Officers of Special Scale (MOSSs).

In 1999 the NZ rural Wairoa-based GP Ron Janes proposed a definition of a rural hospital as: “a facility with no resident medical specialists where acutely ill patients are admitted and cared for by generalist doctors, either GPs or Medical Officers of Special Scale (MOSSs), at a distance from a base hospital”. (23) p297 Noting discrepancies regarding rural in-patient facilities on the Ministry of Health hospital services plan list, Janes, by directly contacting rural health services and practitioners, produced the first comprehensive list of rural hospitals in NZ. (23)

Smaller rural hospitals (catchment populations 5-10,000) were generally staffed by rural GPs, who spent part of their time doing hospital work. Larger rural hospitals (catchment populations >10,000) were more likely to be staffed by a combination of MOSSs working full time in the hospital, with local GPs part of the after-hours roster.

The health reforms in the 1990s had led to closure of some rural hospitals while others had been downsized. With surgical services thus being withdrawn from rural areas, specialist positions, especially the surgical ones, largely disappeared from rural hospitals. (24) The centralisation of hospital services meant not only that equity of access to secondary care for rural communities was being eroded but that further demands were being put on the rural GPs and MOSSs working in these hospitals. (25)

1.2.4 General Practice recognised as a vocational scope

General Practice was recognised by the MCNZ as a vocational scope of medical practice in 1995. (26) This was the culmination of more than a decade of work from committed individuals and organisations. (27) Building on earlier general practice training and education programmes (which had been in place as early as the 1970s in some parts of NZ), a General Practice vocational training programme was established, with focus on community-based primary care. (27) There was no dedicated rural training stream.

1.2.5 Rural medical workforce crisis

From around 1995, for the majority of GPs, hospital practice was no longer part of their work. (28) Key factors contributing to this change in the urban working environment included new scopes of practice (including General Practice) and changing professional boundaries;
increasing specialisation of urban hospital care with a move to community-based care; and the changing regulatory environment. (28)

Emergency Medicine was also recognised as a vocational scope of practice in NZ in 1995 and emergency medicine specialists began providing 24/7 emergency care at base hospital emergency departments. (29) In addition, community-based urgent care facilities emerged in cities and took on an increasing component of acute and after-hours care previously provided by a combination of General Practice and base hospital emergency departments. The New Zealand College of Urgent Care (initially known as Accident and Medical Practice), was formed in 1992 with Urgent Care recognised as a vocational scope of practice in 2000. (30)

In the rural context, things did not develop in the same way. (25, 28) Rural practitioners themselves repeatedly highlighted this as they continued to provide comprehensive care across the primary-secondary care interface including during after hours. (25, 31, 32) Both the new Emergency Medicine specialists and Urgent Care clinics were based in cities and large towns. The broad scope and continuity of care had been regarded as positive and rewarding aspects of rural general practice. (33, 34) However, increasing demands on rural GPs meant that attention began to focus on negative aspects of their work, including the heavy workload, long hours with the difficulty of getting any time away from practice and the challenge of maintaining skills across the broad scope. (33, 34)

A 1999 survey confirmed a worsening shortage of rural GPs. (35) Of the GPs surveyed, only 59% had even basic vocational General Practice training; many were international medical graduates with less than five years of experience in NZ practice; and 50% planned to leave rural General Practice in the following year. (35) Doctors graduating from the three-year community-based General Practice vocational training programme were not replacing their experienced rural colleagues in either their community or hospital roles. The number of rural GPs working in rural hospitals halved between 1999 and 2005. (33, 35-37)

Many rural hospitals over this period became reliant on MOSSs. (2) By 2007, MOSSs contributed 80% of the total number of medical hours worked in NZ’s rural hospitals. (37) There was a lack of consistent standards of care in rural hospitals and the workforce shortage worsened. (2) The situation was summarised as follows:

By 2009, when the first complete survey of the rural hospital medical workforce was undertaken, one third of rural hospital medical positions were vacant, there was a high turnover and international medical graduates made up 68% of the workforce. Seventy five percent of rural hospital managers described the medical staff shortage as serious or critical. (38 p2)
1.2.6 Rural-specific training and continuing medical education

Current international evidence suggests that targeted rural postgraduate training is one of three factors most strongly associated with entering rural practice (the other two are rural origin and positive exposure to rural health services in the undergraduate years). (12, 13, 39, 40) In NZ there had been calls for rural-specific continuing medical education (CME) by rural GPs from as early as 1986. (41) Lack of rural-specific CME and lack of a rural-specific General Practice career pathway were seen as needing urgent attention and among key obstacles to the rural GP workforce crisis. (25, 31-34) A Royal New Zealand College of General Practitioners’ (RNZCGP) report on rural healthcare emphasized the need for rural GP vocational training to include rural hospital practice. (25) Like the rural communities they served, rural GPs knew the importance of hospital facilities for continued access to health services, in particular 24/7 acute and in-hospital care.

At the same time, the challenges of creating a rural General Practice career pathway were well recognised. (31, 33, 42) One concern was that this could lead to tensions between doctors choosing a specific rural vocational pathway thus gaining vocational seniority and older rural GPs who had been “holding the fort” for years potentially not being recognised for their service and experience. (31)

In early 2002 the only rural specific medical postgraduate programmes operating were a limited number of three-month attachments for house surgeons (doctors in their postgraduate year 1 and 2) and ten rural general practice scholarships for registrars. (43) Later that year (2002), the University of Otago developed a distance-taught postgraduate diploma, the Postgraduate Diploma in Rural and Provincial Hospital Practice (PGDipRPHP). (44, 45) This qualification was aimed at rural medical practitioners wishing to undertake relevant postgraduate study while continuing in practice with a focus on the secondary care end of the spectrum of rural practice.

1.2.7 What health care is provided in rural hospitals?

In 2010 the first formal appraisal of the medical work being undertaken in NZ’s rural hospitals found a wide range of conditions were being managed, covering many different vocational areas of practice. (36) Findings confirmed earlier reports that many serious problems, including major trauma and acute medical emergencies, were managed in rural hospitals by rural practitioners (GPs and MOSSs) with only basic laboratory and radiology diagnostic tests available. (32, 36)
1.2.8 Urban-centric views of rural health

In the 2000s, an urban-orientated view of rural health dominated official NZ health documents and reports, including those reports specifically about rural health. One example is the information from rural health workforce surveys commissioned by the Ministry of Health (46, 47) which was used to inform policy and funding decisions. The surveys claimed to provide a snapshot of the rural medical workforce, yet a large component (in 2005 more than half) of the rural medical workforce – the non-GP medical practitioners working in rural hospitals - was not included in these surveys. There was the tendency to think of rural health as being limited to primary care, with primary care itself defined by the Ministry of Health in 2001 as it would generally be practiced in the urban context or in areas of large populations.(48) The concept of town General Practice or “primary care” seemed to be translated directly into the rural setting with little regard for the different context, in particular the spatial isolation from urban-centre services. The 2005 workforce survey states that “Rurality for GPs reflects geographic separation from secondary hospital care services ....”(47 p97) yet ignores the fact that rural GPs and other medical practitioners were themselves providing secondary care services in their local rural hospitals.(47) It seemed that rural hospitals did not fit the economic models used in health service planning and this encouraged the downgrading of rural hospitals and thus erosion of secondary services. The term “benign neglect” was used by Janes to describe the situation concluding that most urban based decision makers did not intentionally set out to neglect rural health but “just have not given it much, if any, thought.”(32 p1)

1.2.9 Rural Hospital Medicine as a vocational scope

Building on the relationships that were forged through rural health networks, including the University of Otago diploma and the Rural General Practice Network,(49) rural hospital medical workforce representatives from around NZ held their first formal meeting in 2005, following which:

A working party was formed made up of both rural GPs and MOSSs with the aim of addressing the professional and training issues seen as the major barriers to resolving the rural hospital and, ultimately, rural medical workforce shortage.(38 p2)

The working party was acutely aware of the need to find a solution that worked equally well for all rural hospital medical practitioners. (1) In 2008 as a result of recommendations made by
the working party, RHM was recognised by the MCNZ as a new scope of practice.(50) and defined as:

... generalist, secondary-level care practised at a distance from specialists and complex diagnostics. The scope is determined by its social context, the rural environment and the demands of this environment which include professional isolation, geographic isolation, limited resources and special cultural and sociological factors.(21)

A rural hospital was defined as one that is:

...staffed by suitably trained and experienced generalists, who take full clinical responsibility for a wide range of clinical presentations. While resident specialists may also work in these hospitals, cover is limited in scope or less than full time.(21)

The RNZCGP established the Division of Rural Hospital Medicine (DRHMNZ), and the Clinical Training Agency (now Health Workforce New Zealand) allocated funding for a RHM training programme. Vocational training in RHM would be undertaken through the DRHMNZ, a chapter of the RNZCGP.(51)

The intention of the new RHM scope was to provide recognised standards of training and ongoing relevant professional development for doctors working in rural hospitals and to encourage development of systems such as clinical governance and credentialing (already routine in large hospitals) in rural hospitals.(1, 50, 51) The DRHMNZ established a valuable and productive relationship with the Australian College of Rural and Remote Medicine (ACRRM).(38) The new RHM training programme was supported in its development through access to the ACRRM curriculum and assessment tools.

1.2.10 The current rural medical workforce

Two recent NZ rural medical workforce surveys have been undertaken (in 2014 and 2015) since the RHM scope was recognised.(3, 52) While both indicate early signs of improvement in the rural hospital workforce, the rural medical workforce overall (rural GP and RHM) is described as remaining fragile with doctors in rural practice aging.(38)

1.2.11 International developments

Rural medical workforce shortages and lack of targeted rural postgraduate training opportunities in NZ discussed above, were mirrored in other countries, particularly and best
documented in Australia and Canada that (at least in the Anglosphere) were leading global rural medicine developments. (53-55)

In Canada in the early 1990s rural family physicians (GPs) doing the same training programme as their urban counterparts, were facing not only the same increased office-based demands as their urban colleagues but growing challenges maintaining knowledge and skills across their broader scope of practice, which included hospital-based medical services, emergencies, and obstetrics. (12)

In Australia, ACRRM was established in 1997 with the mandate that rural and remote practice was different from city based practice and therefore required specific evaluation, training, and support. (11, 56) ACRRM now facilitates, develops, coordinates and supports both undergraduate and postgraduate rural medicine education programmes. (11) The Royal Australian College of General Practitioners (RACGP) has also since developed a rural-specific training option. (57)

Recognising the many serious and similar challenges rural healthcare around the world was facing, the World Organization of Family Doctors (WONCA) in 1992 formed the international Working Party on Rural Practice. (16) In 1995 the working party produced a policy on rural training calling for the development of specific postgraduate training programmes for rural practice including advanced clinical skills. (10, 16, 58)

The Inaugural World Summit on Rural Generalist Medicine, held in 2013 in Cairns produced the Cairns Consensus statement defining rural medical generalism as:

... a scope of practice that encompasses primary care, hospital or secondary care, emergency care, advanced skill sets and a population based approach to the health needs of rural communities. (5)

The statement emphasised population health and multi-disciplinary team approaches that align and are responsive to the health needs of rural communities. The consensus document called for specific rural generalist training pathways and a task group was formed to progress a strategic research framework and establish international collaborations. (5)

The publication of the WONCA Guidebook on Rural Medical Education in 2014 reflected growing worldwide recognition of the importance of rural-specific medical education. (59)

The term “rural generalist”, describing a rural doctor working across the scopes of General Practice and RHM, started to appear in the NZ literature from 2016 with the term “dual
“training” used for those RHM trainees on a dual training pathway with General Practice.(38, 52, 60)

1.2.12 Section summary

This section has outlined the background and development of the RHM scope of medical practice in NZ. In the next section, Hokianga and its health service are introduced.

1.3 Hokianga and its health service

Ma to tatou mahi tahi i runga i te maia, te tika me te pono, ka whihi tatou ki te taumatatanga o te ora mo te iwi o Hokianga.(61)

[By working as one, with courage and mana, integrity and respect, we pursue excellence in the realm of health for all the people of Hokianga].

1.3.1 Hokianga

Hokianga is an area in the far north of NZ, surrounding the Hokianga harbour on the west coast. Hokianga is considered the oldest Māori settlement in Aotearoa (NZ), and is regarded as a place of beginnings for Tangata Whenua (local indigenous people). According to local tradition it was here over a thousand years ago that Kupe, the great Polynesian navigator and explorer, settled after his journey of discovery from Hawaiiki.(62) The second signing of Te Tiriti o Waitangi (The Treaty of Waitangi), on February 12, 1840 took place in Hokianga.(61, 63)

Hokianga today lies within the Far North District of the Northland region situated 85 km northwest of Whangarei and 25 km west of Kaikohe. The harbour estuary extends inland for 40 km from the Tasman Sea. At the harbour mouth, long sand beaches spread along the western coastline with sand dunes rising on the north side. In the hinterland the harbour is surrounded by rugged bush-clad mountains.(63)

Hokianga has a population of approximately 6500 people, dispersed over an area of 1,520 km2, with 70% identifying as Māori .(64) Although historically and culturally rich Hokianga is today one of the most economically poor populations in NZ.(64, 65)

Hokianga transport networks are well behind the standard seen elsewhere in Northland and NZ as a whole. Many roads remain unsealed and there is no public transport.(61)
The harbour, which was well suited as a medium for water transport in earlier years, has become a physical barrier for access between north and south Hokianga, and travel between north and south sides of the harbour relies on a vehicular ferry.

1.3.2 History of the Hokianga health service

An integrated health service, based at the hospital in Rawene, has been running in Hokianga since 1941 when the area was designated a Special Medical Area (SMA). The SMAs were generally remote areas with scattered and often socio-economically deprived populations. Their introduction was aimed at improving access to health care for these populations.

Hokianga Hospital opened on the present site “up on the hill” at Rawene in 1909. This represented the beginnings of a wider local health service developed to fit the place and the needs of the people living within it. The service is described in an early film archive:

_The heart of the Hokianga medical service is Rawene Hospital in the centre of Hokianga: from this hospital the service begins._

The service depended on community effort and cooperation between the different health professionals, the different parts of the service and the people. The hospital was known as sole charge: one doctor (medical officer) providing all medical services in both hospital and community. Most medical officers stayed just a short time. With the arrival of Dr GM Smith in 1914 came stability in workforce and significant changes as he went about improving hospital and clinic standards, with a hospital rebuild in 1927. Dr Smith was a general medical practitioner and a skilled surgeon, well known for his strict rules and immaculate hygiene in the operating theatre. Examples of operations performed at Hokianga hospital at this time included: appendicectomy, mastectomy, hernia repair and caesarean sections.

Around 1940 the Ministry of Health suggested a SMA scheme for the Hokianga district with local provision of all medical and nursing services for the community. Dr Smith developed this concept further establishing a fully integrated health scheme with the underlying principles of equity, accessibility, affordability, integration and cooperation. Education, prevention and treatment (both domiciliary and hospital) were provided free of charge to the local population. Doctors were employed on full-time salaries by the Hokianga hospital board. District nurses, who had the primary responsibility for diagnosing and treating
patients in their remote clinics, were specially selected and seconded from the Department of Health.(68) Dr Smith continued to practice in Hokianga until 1948.(68)

While 1950-80 saw the gradual attrition of SMAs by the government, Hokianga maintained the benefits for its people, with the Hokianga hospital remaining the base of an integrated community health service.(68)

The 1970s heralded a new period of medical workforce stability for Hokianga with the arrival of two permanent general medical practitioners, both originally from the United Kingdom. As other doctors before them, they worked in the community and hospital providing a “cradle to grave” service. They routinely used their surgical, obstetric and anaesthetic skills:

…we had the ability to see someone in the morning, diagnose an acute appendicitis, get theatre ready and remove the offending part and care for them on the ward until they were well enough to go home. Dr A (68 p129)

There was a regular weekly operating day. With virtually no back up available from Whangarei (there was neither helicopter nor paramedic service) the doctors took great care in their selection of elective cases and operations were relatively straightforward e.g.: hernia repair, haemorrhoids, fracture setting, abscess drainage, appendectomies. The doctors also dealt regularly with trauma cases including motor vehicle and farm accidents, rugby injuries and assaults.(68)

By 1987 there were four general medical practitioners at Hokianga and additional services now included on-site X-rays and a basic laboratory service via courier to Whangarei. A helicopter retrieval service was established in 1988.(68) Hokianga hospital was seen by the community as providing a more caring, culturally aware and family-oriented health service than would be available at most larger hospitals. The term ‘general practitioner’ or ‘GP’ encompassed all the roles that a doctor had in the Hokianga health service regardless of whether this was in the hospital, a peripheral clinic or anywhere in the community. The GP was the doctor.(66)

In 1990 the Gibbs Report (70) called for drastic cuts in health funding and the disbanding of the 14 Area Health Boards established from 1983. In 1991 the Department of Health set up Regional Health Authorities and, with members to be appointed by the minister, this meant Hokianga would have no representation.(70, 71) The Hokianga community, concerned that it would lose the benefits of the SMA model including the hospital service, rallied.(68)
Hokianga Health Enterprise Trust (HHET) was formed in 1992 and took over the running of the Hokianga health service carrying over the principles established in 1941 of equity, accessibility, affordability, integration and cooperation, and retained the integrated model of care for Hokianga. (68) The Trust Deed (72, 73) acknowledged Te Tiriti o Waitangi as the founding document of Aotearoa, seeking to work within its articles and pledged:

*To promote preserve and enhance health in the Hokianga area by promoting good health as well as treatment of ill health, promoting the continuation, enhancement and betterment of the integrated service ensuring equity of services within Hokianga.* (72)

Some other rural hospitals in NZ under threat of closure during the 1990 health reforms also underwent transitions to community ownership (notably several in Otago), while others closed. (74) In many cases the responsibility for governance of rural hospitals moved to the base hospitals in town. (24, 74, 75)

The Primary Health Care Strategy, developed to reform primary health care in NZ, led to the introduction of Primary Health Organisations (PHOs) in 2001. (71, 76) The majority of primary care in NZ was provided by sole private GP operators receiving state subsidies for consultations. (77) PHOs were funded by DHBs to support the provision of essential primary health care services through general practices to an enrolled population. Of note, the requirements for PHOs of community representation in governance; not for profit; inclusion of all primary care professionals; and lay membership on the governance board, (77) were already in place at Hokianga.

Hokianga Health’s commitment to community ownership and universally free integrated primary health care placed them in a different philosophical space to most other PHOs across the country. (78) The Hokianga Health integrated PHO was formed in 2004, under the umbrella of HHET, maintaining the unique features of the Hokianga service including the hospital. (68) From 2009 there was a Ministry of Health directed nationwide movement towards amalgamation of PHO’s as small PHOs were considered unsustainable. Hokianga PHO was subsequently disbanded and HHET joined Te Tai Tokerau PHO in 2011. (64, 68)

1.3.3 The Current Hokianga health service

Hokianga Health Enterprise Trust has continued to operate as an independent community-owned organisation through subsequent changes to the District Health Board (DHB) structure. (64) Hokianga Health is the sole provider of health services, including emergency services, for the area. The Trust’s health services are distinguished by the kaupapa (policy or
purpose) of its model of care which is distinctively and uniquely Hokianga, Māori and community focused. (61)

Hokianga Health embraces the model of Te Whare Tapa Wha developed by Mason Durie. (79) Health is viewed as a four sided concept compared to the four corners of a house with the dimensions of taha wairua (the spiritual), taha hinengaro (the psychological), taha tinana (the physical), and taha whenua (the family), all integral to overall health and well-being.

Hokianga Health’s vision statement emphasises the need for adaptability:

To be a centre of excellence for rural healthcare that is responsive to the needs of the people of Hokianga. (1)

Maintaining the integrated care service at Hokianga has meant adapting to policy, funding and nomenclature changes. While the service remains integrated, the funding is fragmented. Funding for primary health care services is currently provided in association with Te Tai Tokerau PHO while funding for the hospital as well as maternity, disability support, public health, and mental health, is provided in association with Northland District Health Board (NDHB). Hokianga Health is acknowledged by the Ministry of Health and NDHB as a Māori Health provider. (61)

1.3.4 Hokianga hospital

The hospital at Rawene continues to be an integral part of the service including the 24/7 emergency service. There is an emergency room and a ward with ten acute care beds and four maternity beds. The nearest base hospital, Whangarei, is two hours away by road. The nearest tertiary centre (and closest cardiac, neurosurgical and vascular surgical intervention centre) is in Auckland, four hours away by road. There are about 750 acute admissions to Hokianga hospital each year of which around 20% are transferred. Hokianga hospital does not have its own laboratory; a DHB funded laboratory service is provided by Whangarei diagnostic laboratory. Specimens are couriered by road every week day morning to Whangarei. Most results are available the following day. This service does not operate at weekends or public holidays. (80) Since 2008 point-of-care laboratory testing for the acute service has been operating at Hokianga hospital. This provides basic biochemistry results (e.g. electrolytes, glucose and renal function). (80) Basic radiology services are provided during normal hours with a digital service now electronically transferring X-rays to Whangarei for reporting. (64)
1.3.5 The medical workforce

Medical staff, currently seven full-time equivalents (FTE), are employed by Hokianga Health and provide all local medical services. Their work includes acute, in-patient, and after-hours care at the hospital as well as standard General Practice at Rawene Health Centre and peripheral clinics. Currently four of the permanent staff have dual vocational registration in General Practice and RHM, one has vocational registration in General Practice, and one is undertaking General Practice vocational training. Two are IMG locums and general registrants.

1.3.6 Hokianga an anomaly?

The current dominant model of care for health services in NZ is one of separated services for primary care (which is community based including General Practice), and secondary care, (which is hospital based). These services also have different funding streams: private General Practice with a patient co-payment providing most primary care and free secondary care via public hospital services operated by DHBs. This health care model is one reasons why the NZ health system performs poorly in terms of financial barriers to accessing health care. Thus the model of care, funding and governance at Hokianga all differ from most health services nationally including rural health services.

From a rural (and Hokianga) perspective all services provided by Hokianga Health, including hospital in-patient and emergency care, fit a comprehensive primary care model, in accordance with the internationally accepted definition of primary health care: 

*Primary health care is essential health care... made universally accessible to individuals and families in the community...It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work...*(83)

The NZ Ministry of Health definition of primary health care is narrower, and primary health care in NZ generally has accordingly come to mean excluding hospital based care:

*Primary health care relates to the professional health care provided in the community, usually from a general practitioner (GP), practice nurse, pharmacist or other health professional working within a general practice.*(48)

A Hokianga Health retired staff member now a Hokianga Health trustee reflects on these changes:
Unfortunately primary health services particularly those inclusive of a rural hospital, appear to be under constant funding threats... (68 p105)

1.3.7 Section Summary

In this final section of the introduction chapter an account of the history of the Hokianga health services has been given outlining the current health service into which in 2008, came the new scope of RHM. In Chapter 2, the methods used in this thesis are presented.
Chapter 2

Methods

2.1 Introduction

In this chapter the research approach taken is discussed and an overview of the methods presented. An account is given of the researcher’s stance (including the relationship between the researcher and the topic of the study) and of the ethical issues. This is followed by a detailed description of the methods including data collection and analysis procedures.

2.2 Methodological approach

This was a pragmatic health services research case study, which used qualitative methods to gain insights into a specific health service development, the new scope of Rural Hospital Medicine (RHM), and its effect in a specific place: Hokianga Health. This constitutes “The Case”. Qualitative methods are widely used in health services research as they enable exploration of complex phenomena thus providing rich descriptions and an in-depth understanding that cannot be found by using quantitative methods.(85-87)

Case study research allows the researcher to understand a contemporary event, its strength being the ability to deal with a variety of evidence. The case study has a distinct advantage when the research questions focus on “how” and “why”.(88) The scope of a case study has been defined as:

an empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context.(88 p18)

The case study method thus lent itself to the thesis aim, i.e. seeking to understand how the new RHM scope had impacted on the Hokianga health service. Case study method relies on multiple sources of evidence, seeking convergence and corroboration from the different data sources thus helping to minimise bias and establish credibility.(88)

The data sources in this case study consisted of a document analysis and semi-structured interviews with key stakeholders. The document analysis process provided background information and insights into the context (Hokianga Health) into which the new scope of RHM had come. Document analysis was chosen specifically as a means of tracking change and development of the Hokianga health service over time.(89)
The goal of the semi-structured interviews was to gain the perspectives of individual participants on the research topic and to understand how and why she or he came to have this particular perspective.(90)

The two data sets (document analysis and interviews) were analysed separately and sequentially: the document analysis was completed first. Thematic analysis was used to identify patterns of meaning across the two data sets with themes identified through a rigorous process of data familiarisation, data coding, repeated revision of categories and theme development. In the interests of completing a project suitable for a Master’s thesis, the perspective of the research is that of healthcare providers, acknowledging that patients and the community are also stakeholders of interest.

2.2.1 Methodology of Part I. Document analysis

The phrase “a case of text providing context” (89p30) is used by Bowen to describe document analysis, which is defined as an iterative process combining elements of content analysis and thematic analysis. Existing documents (both printed and electronic), are evaluated systematically and the data collected in this process is examined and interpreted to gain understanding and develop knowledge.(91) The analytic procedure involves “finding, selecting, appraising (making sense of), and synthesising data contained in documents”.(89p28) The data is yielded as excerpts, which are then organised into categories and themes. There are several advantages of the document analysis method: documents are a good source of background information and can provide broad coverage; they cover long spans of time and multiple settings.(88) Documents are also unobtrusive or nonreactive i.e.: the researcher’s presence does not alter what is being studied. Documents are thus suitable for repeated reviews.(89)

Potential limitations inherent in document analysis include the time consuming nature of collecting, reviewing and analysing multiple documents and the low retrievability of documents due to difficulty in access. There is potential for bias because of selective survival of written information or records and the incomplete selection of documents (e.g. only those representing a particular perspective) can suggest “biased selectivity”.(88, 89) It is important to determine not only the relevance to the research question of particular documents but also their authenticity, usefulness and representativeness. As with all qualitative research methods attention to robust data selection and collection techniques and clear documentation of the research procedure is required.
Document analysis can be used, as in this thesis, in combination with other qualitative research methods as a means of triangulation through the use of multiple sources of evidence. (88, 89)

2.2.2 Methodology of Part II. Qualitative interviews

The most common method for data collection in qualitative health research is interviews, usually semi-structured or unstructured in nature. (92, 93) Semi-structured interviews are most commonly conducted one-to-one and use low degrees of structure and predominantly open ended questions to seek the interviewee’s point of view. The focus is on gaining understanding of the meaning of particular phenomena to the interviewee. (93) The interviewer might reword or reorder questions as the interview proceeds.

Semi-structured interviews (as opposed to data collection methods such as written questionnaires or structured interviews) create a forum for interaction and clarification, providing the opportunity for further exploration of any issues including those that are not anticipated. In contrast to document analysis the researchers presence, as the main instrument of data collection, does influence the interview. (94) This is addressed further in section 2.3.

Thematic analysis is widely used in qualitative research and is essentially a method for identifying, analysing, organizing, describing, and reporting themes found within a data set. (95, 96) It has been described as a “foundational method for qualitative analysis”. (95p4) Thematic analysis offers an accessible and theoretically flexible approach to analysing qualitative data; it does not require the detailed theoretical and technological knowledge of other qualitative approaches. (95) This can be an advantage particularly for relatively new researchers (such as a master’s thesis candidate). Because there has traditionally been little published guidance regarding thematic analysis (compared to other qualitative methods for example grounded theory or phenomenology) a potential disadvantage for this method has been uncertainty regarding rigor. However literature is now available outlining the theory, application, and evaluation of thematic analysis. (95-97)

The framework method is a practical procedure for conducting a rigorous thematic analysis in tandem with a framework. (97) and is defined as follows:

*The Framework Method sits within a broad family of analysis methods often termed thematic analysis or qualitative content analysis. These approaches identify commonalities and differences in qualitative data, before focusing on relationships between different parts of the data, thereby seeking to draw descriptive and/or explanatory conclusions clustered around themes.* (97 p2)
As shown in Figure 1, the framework method provides clear practical steps to follow, from transcription of the interview stage through to developing an analytical framework and data interpretation. A key feature of the framework approach is the generation of a matrix output. A matrix is defined as a spreadsheet containing numerous cells into which summarized data are entered by codes (columns) and cases (rows), and is particularly useful when a research project involves multiple researchers as it allows all members of a team to easily engage with the data. In view of the small team involved (candidate and supervisor), a modified version of the framework method was used in this thesis, omitting stage six.

<table>
<thead>
<tr>
<th>Stage 1: Transcription</th>
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<tbody>
<tr>
<td>Stage 2: Familiarisation with the interview</td>
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<tr>
<td>Stage 3: Coding</td>
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<tr>
<td>Stage 4: Developing a working analytical framework</td>
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<tr>
<td>Stage 5: Applying the analytical framework</td>
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<tr>
<td>Stage 6: Charting data into the framework matrix</td>
</tr>
<tr>
<td>Stage 7: Interpreting the data</td>
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</tbody>
</table>

*Figure 1. Framework Method Steps (97)*

Although the analysis method is presented here as linear and phased, in reality as in other qualitative research methods, it is an iterative and reflective process rather than distinct steps. It develops over time and involves a constant moving back and forward between the entire data set (the coded extracts of data that are being analysed) and the analysis of the data that is being produced.(97)

2.3 The researcher’s stance

The experiences and interests of a researcher can influence their research regardless of methodology, including the study topic choice.(94) In the case of qualitative research it is particularly important to consider the influence of the researcher, their background and their person on the research process. Factors such as the professional identity of the researcher can play an important part in constructing the kind of data obtained in studies.(98) Qualitative research can be viewed as insider or outsider research. Insider research: “refers to when researchers conduct research with populations of which they are also members”.(99p58) There are strengths and challenges of both insider and outsider positioning and a researcher can at the same time occupy both of these positions.(99) In this thesis the research subject is
embedded in the real-life experience of the researcher making her an insider, yet in her position of researcher and university employee she is an outsider. Thus she occupies: “the space between” as described by Dwyer (99 p60).

The researcher is a rural hospital doctor, part of the reality the research is aiming to understand. She has been a clinician at Hokiaanga Health since 2003, is vocationally registered in General Practice and RHM, a member of the DRHMINZ Board of Studies, a teacher of the RHM training programme and one of the initiators of the RHM training programme. She is also part of the local Hokiaanga community having been involved over years at the community level; she and her family have been patients of the health service. While this has allowed awareness of key issues and buy-in at Hokiaanga (including good access to data, both documents and interviewees), the candidate has been aware of and acknowledged her own subjectivity throughout the research process. In general terms the thesis subject is not a sensitive nor personal one. The topic of the research was independent of, and predated, the study, and was a common subject of discussion between staff at Hokiaanga Health. Both participants and researcher were regularly confronted with the issues at the core of this research before and during the research study period.

The pre-existing relationship between the researcher (interviewer) and interviewee (participant) is likely to have had an impact during the interview process, for example it may have inhibited some revelations by some interviewees and facilitated others (100). In addition, as the primary reviewer of documents and transcripts, the candidate was the main instrument of data collection and thus played an active role in identifying themes and selecting relevant excerpts.

The candidate kept a log (manually in a notebook and electronically using One Note Word) with reflections of how she may have influenced data collection: a reflective journal. This included noting when the researcher felt there might be something in the pre-existing relationship with the interviewee that could impact the interview, for example a power imbalance in the case of a former medical director or a trainee. The candidate had some concern about how much interaction she (the interviewer) should have and whether this could influence the responses. She was aware of her closeness to participants having worked alongside most of them for years at Hokiaanga hospital. The reflective journal thus provided a research trail of how reflections may have shaped the analysis and led early on to changes to the approach to interviewing. An excerpt from the reflective journal as an example is shown in Figure 2. Data collected was reviewed by the supervisors (TS, SD) at regular intervals including entire transcripts of individual interviews.
2.4 Ethics approval

Ethical approval for the research was obtained from the University of Otago Human Ethics Committee 16/085 (see Appendix I). Ethical issues relevant to the research were:

i) The relationship of the interviewer to the participants: there was potential for conflict of interest between the candidate’s role as the main researcher and her other roles at the place of research. This was laid out in the information sheets for participants (see Appendix II).

ii) Protecting interviewees’ information, given the small community of eligible participants there was a risk of being identified.

All participants were asked to respond by completing the consent form that gave them the option of consenting or not consenting to participate in the study (see Appendix III). Participants were assured that their contribution to the research would be treated as confidential and anonymous. This was explicitly addressed in the information sheet which participants were asked to read before signed consent was completed. Participants were advised that they could stop the interview at any point and could elect to erase the recorded interview or any part of it at the end of the interview process. Before finalising the transcription participants were invited to review and edit transcripts of their interviews. The taped interviews and transcripts were password protected on the researcher’s university computer. Confidentiality was further achieved by limiting the transcript readers to the researcher and her supervisors and removing all identifying data. There was no payment for
participants. All identifying data was removed before quotes were used in the study. To maintain participant anonymity, all respondents were designated a number (R1-R11) and were referred to throughout the analysis process by this coding e.g. Respondent 5 or R5. All participants were informed that they would have access to the final report of the study.

2.5 Methods Part 1. Document analysis

The aim of the document analysis was to meet objective one of the study:

To review relevant documents to explore the impact if any, of the scope of RHM at Hokianga Health.

The analysis involved key documents for Hokianga Health, both from inside and outside the organisation. The focus was on documents from the period around the establishment of the RHM scope and training programme. The following sections outline the procedure followed for identifying, analysing and deriving relevant information from the documents.

2.5.1 Selecting documents for analysis

The document archives at Hokianga hospital were manually searched with assistance from Hokianga Health administrative staff. Electronic searches using the university library Ketu search engine and of other websites including RNZCGP and Hokianga Health(61, 101) were conducted using search terms: Hokianga Health; Rawene hospital, and Rural Hospital Medicine, with date range of 2000-2016. Some documents retrieved were hard copy only, but most were in electronic form. In total thirty documents were identified for analysis: they included reports, archival documents, published academic journal articles, meeting minutes, reviews and letters. Regarding the use of previous published studies as a source of data, the researcher relied on the description and interpretation of data presented within the documents selected for document analysis. She did not separately analyse the content of these publications per se as has been recommended for document analysis.(89)

2.5.2 Immersion in the data and generating initial categories

A list of twelve codes (key words and phrases) was derived from the original research proposal document (see Appendix IV). These codes were applied to each document during the first-pass document review as described by Bowen with each document skim-read to identify code-containing passages of text.(89) For electronic documents this was done as a word
search: otherwise, documents were searched manually. As the first few documents were reviewed additional words and phrases were added to the initial code list.

Relevant documents then underwent attribute coding: each document’s date, author, context and purpose were recorded. This served to establish the meaning of each document, its original purpose and thus its contribution to the research question. Four documents with no key words found were not further considered. These were minutes of governance and significant events meetings at Hokianga Health, and one academic paper.

Twenty-six documents from 2002 to 2016 were included in the analysis. The documents provided convergence of information from different sources. Ten documents were internal to Hokianga, sixteen external to Hokianga. Internal documents included Hokianga Health Annual Reports (2002, 2005, 2007, 2009, 2011, 2015 and 2016), minutes of meetings e.g. significant events, credentialing documents and an audit. Documents external to Hokianga Health included: two reviews by Health Partners Limited of the Hokianga health service; Northland DHB documents with a regional perspective; RNZCGP-DRHMNZ documents spanning the years 2010-2016, academic journal publications 2010-2014; and a University of Otago rural programme review from 2013 (see Appendix V for full list of documents reviewed).

Each document then underwent a more thorough read during which the highlighted words and their associated passages of text were examined more closely and, in this way, initial categories were constructed. Excerpts were manually coded in a systematic fashion across the entire data set (i.e. all the documents), collating data relevant to each category, i.e. first cycle coding using descriptive coding.(102) Individual extracts of data could thus be un-coded, coded once or coded many times (in more than one category). Notes were kept during this process (One Note, Windows Word), of ideas and thoughts generated during the reading and re-reading.

2.5.3 Searching for themes and reviewing themes

After all data had been coded and collated, analysis was refocused at the broader level. This involved sorting the different categories into potential themes, considering the relationship between the categories and the different levels of themes. This process occurred over several months with frequent review of the data, moving backward and forward between the coded extracts and the analysis as it was being produced.(95) Visual representations and thematic maps were used to help the analytical process at various stages. Some categories were
combined, others refined or separated. As analysis progressed it became more clear that themes were embedded within a wider chronological narrative influencing the presentation format.

2.6 Methods Part 2. Interviews

The aim of the interviews was to meet objective two of the study:

To explore in depth perspectives of Hokianga Health’s medical staff and key non-medical staff on the impact on Hokianga health services of the RHM scope.

2.6.1 Participant selection

Participants were purposively selected: all had been employed at Hokianga Health for a minimum of six months between 2005 and 2016. Eight participants were medical doctors, reflecting the medical focus of the research question and included doctors who had since retired, doctors in vocational training as well as doctors currently employed at Hokianga Health. Three further participants, the Chief Executive Officer (CEO), the Clinical Nurse Manager and one of the Hokianga Health Taumata (Māori cultural advisor), were included to bring additional organisational and community Hokianga perspectives while remaining within the resource constraints of the study. Most participants were working at Hokianga Health at the time of the study and were informed about the research at Hokianga hospital in person by the researcher either at the doctors’ weekly meeting or at an arranged individual meeting. Those participants not working at Hokianga at the time of the study were contacted personally by email or phone. The purpose of the research was explained, and all participants were given the information sheet. All participants were sent further information regarding the interview process, including the information sheet and consent document, by email. No one declined to participate.

Eleven interviews were completed. This sample size was settled on by the primary researcher and supervisors (TS, SD) as a number capable of discovering most variations of experience of the phenomena, even if those experiences were not analogous. It also took into account the average number of full-time-equivalent doctors working at Hokianga Health at any one time during the period of interest (2005-2016), which was six. All interviewees were well known to the candidate as current or previous work colleagues. The eight doctor participants included three permanent doctors, two retired long serving doctors, two RHM/General Practice trainees and one locum. This mix was anticipated to provide a wider range of perspectives than a single group for example only permanent staff. The CEO, Nurse Manager and Taumata had
been in their current employment positions with Hokianga Health for greater than a decade at the time of the interviews.

2.6.2 Interview schedule

The interview schedule aimed to explore participants’ accounts of how the RHM scope of practice had impacted on them and their work in Hokianga, and on the health service as a whole. The interviews were organised around a set of predetermined open-ended questions developed in consultation with the research supervisors. Questions were developed to be broad prompts to the interviewees and were responsive to the issues identified in the literature review and the document analysis. The question schedule varied slightly for non-medical participants (see Appendix VI and VII).

Opening questions served to collect demographic and background information including the participants’ training and work history. The general line of questioning then explored the participant’s view of the RHM scope of practice and if and how this had affected their work and the health service at Hokianga.

2.6.3 Interview and transcribing Process

Interviews were conducted by the candidate. Discussion was allowed to range freely with flexibility to explore other issues emerging from the dialogue and to pursue any particular issues raised by the interviewee. All interviews were conducted face to face, from October 2016 to February 2017, with date and times catered to the interviewees’ schedule and availability.

All but one interview were conducted at Hokianga hospital. One interview of a doctor who had moved away from Hokianga was conducted in Dunedin. Interviews lasted between 35 - 60 minutes, with an average of 45 minutes.

All interviews were digitally recorded and then transcribed into Microsoft Word documents. The first interview was transcribed by the candidate, and checked by SD. The remaining interviews were transcribed by a professional transcriber. The transcripts were then checked against the audio recording by the candidate and if needed corrected and then sent back to participants to again check accuracy and invite further edits. The interviews were transcribed for analysis as soon after the interview as possible, and for most this was within two days, for all within five days.
During one interview the recording failed part way through and this was only recognised several hours after the interview had been completed. Options were discussed with the interviewee the following day and the interviewee agreed to complete a written response to those interview questions which had not been recorded. While not ideal, time pressures meant repeating the interview was not possible.

The interview transcripts (Microsoft Word documents) were transferred into a qualitative data software programme N-Vivo version 11 (QSR International NVivo 11 Qualitative Data Analysis Software), allowing subsequent coding of themes and categories from the data. All audio recordings and transcripts were stored on the candidates’ password protected University of Otago computer.

2.6.4 Thematic analysis

The analysis of data followed the steps outlined below (95, 96):

1. **Familiarisation with the interview data:** analysis began with the candidate listening to the recordings then reading and re-reading the transcripts with reflective note taking both manually and electronically, using the margins, on repeated reads. The candidate and main supervisor (TS) read the two initial transcripts together followed by a discussion to develop ideas about what was being said. The candidate summarised each transcript in a short paragraph to capture its main story or message. Initial theoretical and reflective notes were taken but no coding was done during this phase.

2. **Coding:** this began with the same two initially reviewed transcripts using first cycle (“initial” or “open”) coding.(102) Coding was done manually with the candidate carefully reading the transcripts line by line and applying a word or phrase that described what had been interpreted as important in the paragraph or passage. Concurrently, analytic memos were written and stored on N-Vivo. The first two transcripts were also independently coded by TS. After loading all transcripts onto N-Vivo, the candidate then familiarised herself with further transcripts and coded these using N-Vivo. Once five transcripts had been coded the initial codes were reviewed (KB and TS) to justify each code’s inclusion and an initial analytical framework was created (KB and TS). All transcripts then underwent initial coding using this framework. N-Vivo was useful in helping the organisation and navigation of the data. Reflective journaling of emerging impressions of the data’s meaning continued throughout this phase.
3. **Searching for themes**: once all the data had been coded and collated into the framework all the potentially relevant coded data extracts were sorted into themes. This was initiated by thinking through (KB) and discussing (KB and TS) the important concepts (those that linked substantial parts of the data and related to the overall research question) that were coming through the data. Notes, diagrams and mind maps, using both N-Vivo, Word documents and scribbles on paper, were used to organise codes and themes, starting with some of the framework “nodes”. An “other” theme was created to temporarily store codes and extracts of data that seemed important but did not clearly fit into a theme. A combined inductive-deductive approach was used, initially generating codes from the data but then returning to the interview questions and later the literature to help further explain themes.

4. **Reviewing themes**: once a set of themes was drafted, refinement was needed. Coded data extracts for each theme were reviewed considering if a coherent overall pattern had been formed. Some initial themes did not accurately reflect the meanings of the data set assigned to them and had to be changed. Some themes overlapped substantially and were deleted. Various changes meant some recoding of extracts was needed, data volume was reduced and text made more succinct. At the end of this phase data within each theme was coherent and meaningful and each theme could be clearly distinguished from other themes. This phase was completed over a number of weeks, the candidate returning frequently to the data to ensure themes reflected the participant voice. The draft was reviewed by and discussed with TS. At the end of this phase the candidate had a good idea of the different themes, how they came together and the overall story they told.

5. **Defining and naming themes**: during this final phase there was further refining of themes and subthemes with further analysis of the data. Discussion and debriefing with TS continued throughout this phase. Data extracts for each theme and subtheme were reviewed and reduced. An analytic narrative was continued and refined. Themes and subthemes were named (KB and TS). At the end of this phase the scope and content of each theme was clearly defined.

**2.6.5 Criteria for reporting qualitative research**

There is debate regarding the use of checklists for qualitative research, however there is agreement that these can improve the consistency of reporting of methods and findings.
Checklists are also increasingly required by editors for publishing articles. Accordingly the COREQ tool was used as a checklist in this thesis (see Appendix VIII).(103) The “Trustworthiness Criteria” as outlined by Nowell (96) were also used as a guide in this thesis. For example: coding of document analysis was carried out by KB but overviewed by SD; coding and thematic analysis of initial interview transcripts were carried out by both KB and TS ensuring concordance; the primary supervisor of the thesis (TS) read through several transcripts and approved the thematic analysis approach; all participants received the transcripts of their interviews for corroboration.

2.7 Chapter summary

The case study of the new scope of RHM and its effect at Hokianga Health, drew on two data sources (documents and interviews), each analysed separately and sequentially. The findings, seeking corroboration and convergence from the two sources of evidence, are reported in the next chapter.
Chapter 3
Results

3.1 Introduction
The aim of the study was to explore the impact of the Rural Hospital Medicine (RHM) scope at Hokianga Health. The objectives were met using two data sources, document analysis and interviews, which were analysed separately and sequentially. In this chapter the results of first the document analysis, then the interview analysis are presented. In the final section of this chapter corroboration and convergence of the findings from the two data sets is discussed.

3.2 Results Part I. Document analysis

3.2.1 Overview
Document analysis addressed the first objective of the study:

To review relevant documents to explore the impact of the scope of RHM at Hokianga Health.

The document analysis provided broad insider and outsider perspectives, tracking change and development at Hokianga Health over fifteen years leading up to and extending beyond the time of introduction of the RHM scope. In this section, the results of the document analysis are presented embedded within a chronological narrative in three time periods: 2002-2007; 2007-2009; and 2009-2016. There is convergence of findings from the different data sources (document authors) within the analysis, e.g. Hokianga Health, NDHB, RNZCGP (see Appendix V for the author and context of each document).

Documents were designated a number according to the document list and are referred to throughout by this coding, e.g. D1, D2. Illustrative document quotes are presented.

3.2.2 2002–2007: Defining what Hokianga Health “does”

Over the period 2002-2007 Hokianga Health was continuing to carry forward the kaupapa (vision) of the service laid down decades earlier. There had been no need for its practitioners to explicitly define the breadth of medicine practiced it was simply: “the way we practice here”. In a changing regulatory environment, part of this traditional practice was no longer seen in most of the country as General Practice. Hokianga Health realised that without clearer articulation of “what their medical practitioners do”, the viability of their integrated model of
care would be under threat. Hokianga Health had long established links with the RNZCGP as both the professional body for meeting the regulatory requirements for their medical practitioners, and through their role as a teaching practice for the General Practice training programme. Doctors at Hokianga continued to practice in the hospital, incorporating ongoing relevant training even as this had become a less accepted part of General Practice around the country (D1).

In 2005, two significant issues faced Hokianga Health, the first a hospital facilities upgrade, required in order for the hospital to maintain its license to operate. Hokianga Health started to consider what was needed to ensure continuation of appropriate services. The second issue was a medical workforce shortage. Local consciousness was growing regarding rural-specific workforce issues including recruitment (D2).

While Hokianga Health saw its strategies clearly aligned with those of the new national Primary Health Strategy and PHOs, it recognised that the hospital services would no longer be considered as part of primary health care thus creating a vulnerability for their model of care. Different nomenclature would be needed to fit changing external policy and regulations if the integrated service was to continue. Terms such as “extension of primary care” appear in Hokianga annual reports from 2002:

...Hokianga hospital is ...an extension of the [Hokianga Health] primary health services. Its functions are to provide a readily accessible 24h advisory and support service. (D1)

The 2005 annual report describes more distinctly the hospital part of the service:

...the clinic services are backed up by more comprehensive medical services ...incorporated in the hospital. Emergency services are provided at the Health Centre or in the acute inpatient area of the hospital. (D2)

Hokianga Health achieved service-wide accreditation in 2005, requiring two separate processes, one for the health centre and clinics (through the RNZCGP), the other for the hospital (through Quality Health NZ). While for Hokianga the GP was the provider of all medical services and the RNZCGP their professional body, RNZCGP accreditation did not extend to the hospital aspects of the Hokianga GP’s work (D2).

In 2007 an external review of Hokianga hospital was commissioned by its funder (the NDHB), specifically to assess the clinical and financial viability of the acute inpatient service (D4, D5). The review proposed three options for the service’s future: to keep the status quo; to adopt a stronger focus on managing patients in the community with a downgrade of the
hospital service; or to increase capability to manage a wider range of patients and potentially over a wider catchment area. Future investment in the hospital facility at Hokianga as the best way to meet the health needs of the population was a discussion point in the review’s conclusion. The review commented on the hospital-based work provided by Hokianga GPs, recognising this as different from city-based General Practice:

All GPs share the on call roster for acute presentations and ward care...Services provided include resuscitation, assess, admit and treat; assess and transfer, rehabilitation. Specifics of acute inpatient components of work include 24 h services, triage, acute short-term medical management, prompt identification and treatment intervention for people in acute medical distress. (D5)

The reviewers recognised the importance of this broad scope of practice in enabling access to services for the high needs and geographically isolated population. The Hokianga health service was described in the review as providing:

Comprehensive integrated primary health care services and acute inpatient GP care (D5).

The use of two adjectives before both “primary health care” and “GP” suggests a difficulty in applying these terms at this time in the Hokianga context. Hokianga medical practitioners themselves used the term primary-secondary care to describe the hospital’s services (D6).

By the end of 2007, Hokianga Health had come through the external review retaining the status quo but remaining acutely aware of the threat to its hospital service and therefore of the need to keep pace with changing practice and nomenclature to ensure equity for its community (D4).

In summary the main themes identified during the period leading up to the RHM scope’s introduction were: articulating the scope of practice at Hokianga Health; mismatch of available scopes of medical practice; vulnerability; and the importance of changing nomenclature.

### 3.2.3 2007-2009: a new scope of medical practice and a new definition of a rural hospital

In 2007 the Rural Hospital Working Party, made up of rural doctors from around NZ, were defining RHM, with breadth of scope and distance from specialist services as key elements. Hokianga clinicians and management had been involved early on in the national meetings where discussion and debate amongst stakeholders (including health professionals, health service managers and academics) were occurring. These connections were important for
Hokianga, allowing them to keep step with the changing external regulatory environment and language but also ensuring their perspective would play a part in developments. The NDHB-commissioned external review of 2007 recognised:

*The role of Hokianga Health in building capacity and capability of the rural health workforce across NZ through linkages with training programmes and academic institutions (D5).*

With the establishment of the RHM scope in 2008 now providing a good match for the missing component of Hokianga medical practice and the inclusion of Hokianga hospital in a 2008 national list of rural hospitals, came a sense of belonging.

From 2008 Hokianga Health’s external linkages continued to strengthen (D26). While Hokianga Health had been involved for decades in the teaching of University of Auckland’s undergraduate medical students, this was more formally endorsed from 2008 with Hokianga one of the sites for the new regional-rural (Pukawakawa) programme (D12). Hokianga had also been involved in teaching University of Otago’s postgraduate rural medical programme from 2006 including bi-annual workshops based in Hokianga (D17). This now led to collaboration on a number of health services research projects evaluating aspects of Hokianga hospital practice, adding credibility to the associated quality improvements at the hospital (D10).

In summary, the main themes identified during the time period of the RHM’s scope’s introduction were: belonging and connectedness.

### 3.2.4 2009-2016: a time of settling-in and realignment with a new scope of practice and new definitions

Naming and defining the hospital part of the work practiced by Hokianga doctors gave it validity and encouraged benchmarking. The 2009 Hokianga Health annual report more clearly and confidently described the role of the hospital within the wider health service (D7). Hokianga Health and other rural health services involved in the RHM development made sense of language or nomenclature from their rural perspective. There was increasing recognition by the NDHB of RHM, which was perceived by the NDHB as a new area of practice:

*... increasing integration of rural hospital medicine specialist ... and GP led models of care that blur traditional boundaries between ‘primary’ and ‘secondary’ care. (D13).*
From the Hokianga perspective, however, “traditional” was blurred boundaries between primary and secondary care, between community, clinics and the hospital (D6).

In 2011 the NDHB, reviewed the role of its district hospitals, including Hokianga, in providing urgent and emergency care. Fellows of RHM were by this time working in all of Northland’s regional rural hospitals, albeit in different models of care. Terms such as RHM, “GP-led”, “emergency department” and “acute assessment unit” were often used interchangeably in the review, reflecting changing definitions and different perspectives (D13).

Hokianga Health was acutely conscious of not wanting to augment disparities for its population by falling short of agreed national standards for high quality health care. National guidelines for common clinical presentations in line with those of its referring base hospitals and national standards were being implemented by 2009 at Hokianga hospital (D7). By 2010 it had become evident that baseline diagnostics (i.e., laboratory and radiology) were necessary to support doctors in delivering an acute hospital service (D8, D13). Availability of laboratory tests was one of the criteria in the application for a rural hospital to gain accreditation as a training post for the DRHMNZ (D8). With external support from the NDHB laboratory, Hokianga Health proceeded to implement point-of-care laboratory testing in 2009, simultaneously running an evaluation in collaboration with University of Otago researchers, and by 2011 Hokianga Health was investigating other diagnostics including point of care ultra-sound and digital radiography (D12). Having direct access to diagnostics gave the doctors at Hokianga more diagnostic certainty and thus confidence in their RHM work (D11).

It was intended that the new RHM scope would: …provide a cadre of clinical leaders who will take responsibility for the clinical governance in rural hospitals (D14). While a Medical Director role was long established at Hokianga Health, formal introduction of clinical governance after the establishment of the RHM scope led to increased engagement of clinicians in leadership roles (D7).

Credentialing had been identified as another way to improve standards in rural hospitals (D14). One of the criteria for gaining DRHMNZ accreditation as a training site for RHM registrars was medical staff credentialing (D8). As medical staff at Hokianga Health had historically identified as GPs, aligning with the RNZCGP and its processes, there was no formal hospital credentialing process in place at Hokianga hospital (D9). The DRHMNZ Board of Studies granted accreditation to Hokianga Hospital on the basis that credentialing for medical staff specific to their hospital scope would be developed (D9). In 2015 when
DRHMNZ accreditation for Hokianga hospital came up for renewal and progress had not been made, re-accreditation for Hokianga was impeded. This prompted communication between Hokianga’s Medical Director and the Chief Medical Officer of the NDHB leading to a series of meetings to clarify and progress the relevant issues (D23), resulting in the development of a credentialing document specifically for Hokianga hospital. Although initially causing some angst for Hokianga staff, all participants found the process a positive one (D22 D25). Advantages to Hokianga Health of having a formalised credentialing process were emphasised by the DHB:

Credentialing... also provides the opportunity to identify areas where access to resources, equipment, training or services can improve the delivery of health care by rural hospital doctors (D25).

With credentialing established Hokianga regained accreditation for DRHMNZ training (D25), facilitating a pathway for accommodating registrars in the hospital aspect of practice at Hokianga (D8).

A further external review of Hokianga Health was commissioned by the NDHB in 2013. While four of the seven doctors at Hokianga by this time had dual (General Practice and RHM) vocational registration, the review used the term “GP” to define them, though the review’s description of their scope of practice included RHM (D20). The review identified that: the recognition of Hokianga hospital as a core member of the NDHBs network of district hospitals (D19), would strengthen Hokianga hospital’s clinical sustainability by providing better external support. The review also identified challenges Hokianga Health had faced in achieving and maintaining standards:

Hokianga Health has contained costs by freezing wages and conditions for staff (D19).

However, Hokianga was now much better positioned than in 2007, the time of the previous external review. The review’s conclusion includes affirmation of the relevance of Hokianga’s integrated model of care:

Hokianga Health’s Model of Care is broadly in line with national and international trends ...integration of general practice with hospital services, local access to diagnostics and community governance all position the organisation well in terms of contemporary best practice (D19).
For Hokianga Health essential factors to sustain its model of care going forward included a medical workforce able to work across both General Practice and RHM (D15) and: *to ensure recognition of the value of the Hokianga hospital service by the NDHB* (D7).

The 2016 Hokianga Health annual report affirmed the positive impact of RHM:

\[
\text{The [Hokianga Health]Trust's commitment to the development of the rural hospital medicine career pathway is supported by our dedicated team of experienced doctors, and the programme is invaluable to the future rural workforce and to Hokianga Health (D26).}
\]

An excerpt in the same report notes the various terms that had been used by others over decades to describe Hokianga Health’s enduring model of care:

\[
\text{Elements of the Hokianga Health care model have been variously described over the years as a model of socialised medicine, comprehensive care, integrated care, whanau ora, community development, and integrated family health centre (D26).}
\]

The main themes identified for this last period, the eight years after the RHM scope’s introduction, were thus: benchmarking; growing connectedness; challenges; changing nomenclature and optimism.

### 3.3 Results Part II. Interviews

#### 3.3.1 Overview

Semi-structured interviews were conducted to address the second objective of the study: to explore in-depth perspectives of Hokianga Health’s medical staff and key non-medical staff on the impact on Hokianga health services of the RHM scope.

Interview questions explored participants’ accounts of how the RHM scope of practice had impacted on them and their work in Hokianga, and on the Hokianga health service as a whole. In this section, the findings of the interview analysis are presented beginning with the characteristics of the participants followed by the main themes and subthemes.
3.3.2 Participants

3.3.2.1 Characteristics of the medical participants

Table 1 shows the characteristics of the eight medical participants including their year of graduation, time employed at Hokianga Health and scope of MCNZ registration. Given the small community of eligible participants and therefore the risk of being identified, detailed demographics (for example age, gender and ethnicity) were not collected.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No of medical practitioners</th>
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<tbody>
<tr>
<td>Year of Graduation</td>
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<td>Before 1995</td>
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</tr>
<tr>
<td>After 2000</td>
<td>3</td>
</tr>
<tr>
<td>Place of primary medical qualification</td>
<td></td>
</tr>
<tr>
<td>NZ</td>
<td>2</td>
</tr>
<tr>
<td>UK</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>Time employed at Hokianga</td>
<td></td>
</tr>
<tr>
<td>&gt;20y</td>
<td>3</td>
</tr>
<tr>
<td>&gt;10y</td>
<td>2</td>
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<tr>
<td>&lt;1y</td>
<td>3</td>
</tr>
<tr>
<td>Vocational Scope</td>
<td></td>
</tr>
<tr>
<td>GP</td>
<td>2</td>
</tr>
<tr>
<td>GP &amp;RHM</td>
<td>4</td>
</tr>
<tr>
<td>In Training</td>
<td>2</td>
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<tr>
<td>Capacity at Hokianga</td>
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<td>Place of current employment</td>
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</tr>
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<td>3</td>
</tr>
<tr>
<td>Retired</td>
<td>2</td>
</tr>
<tr>
<td>Other rural NZ</td>
<td>3</td>
</tr>
</tbody>
</table>

3.3.2.2 Characteristics of the non-medical participants

The remaining three participants were: the Hokianga Health Chief Executive Officer, the Hokianga Health Clinical Nurse Manager and a senior member of the Hokianga Health
Taumata (Māori cultural advisor). All three had been in their leadership roles at Hokianga for more than ten years at the time the interviews were conducted.

All participants, both medical and non-medical, were designated a number (1–11) and were referred to throughout the study by this coding (e.g. Respondent 5 or R5). Numbers do not differentiate between medical and non-medical participants as this assists in maintaining participant anonymity.

3.3.3 Overview of themes

Four major themes were identified, which were broken down into subthemes, as follows:

1. “It’s what I do”: articulating the scope of medical practice at Hokianga.
   - 1.1 Focus on clinical aspects
     - 1.1.1 General Practice, Rural Hospital Medicine or both?
     - 1.1.2 Anxiety
     - 1.1.3 What was lost
   - 1.2 The right training (for what I do).

2. “What we do” : the importance of the hospital at Hokianga
   - 2.1 Our context
   - 2.2 Our role
     - 2.2.1 Clinical breadth
     - 2.2.2 Navigation
     - 2.2.3 Package deal
   - 2.3 Home

3. On the fringes
   - 3.1 Mismatch and vulnerability
   - 3.2 Undervalued
   - 3.3 Not belonging

4. Survival
   - 4.1 Benchmarking
     - 4.1.1 Commitment to clinical safety
     - 4.1.2 Cost of benchmarking
   - 4.2 Growing connectedness
   - 4.3 The right language
- 4.4 Optimism

Illustrative participant quotes are presented.

3.3.4 Theme 1. “It’s what I do”: articulating the scope of medical practice

3.3.4.1 Focus on clinical aspects

General Practice, Rural Hospital Medicine or both?

Hokianga’s long serving doctors, established in practice well before vocational scopes of practice were introduced, had had no reason to explicitly define their scope of practice: it was just “what they did”:

When I came here I just did stuff because I could do it. No one asked me whether I had a scope of practice, so we used to do – [name of doctor] used to gas for me, and we’d do the stuff, and people were very happy to have that service. I think I did 35 tubal ligations in one year. In 1980 I suddenly decided that, yeah what I’m doing is general practice. (P2)

Over the next two decades with exposure to other models of general medical practice through their professional linkages with the RNZCGP and involvement in the General Practice training programme, Hokianga doctors became more aware of what was understood nationally as General Practice. They began to use terms such as “normal GP” and “straight GP” to describe General Practice in the rest of country.

All participants had a common understanding of General Practice as practice that was mainly office-based consultations and appointment systems, regardless of whether it was urban or rural:

Rural was a place like [place names] which, whilst they’re small rural towns - what I was doing there was just the same stuff as you’d find I’m sure in any practice in a city. You basically sat down, every quarter of an hour you had a patient come through and that was what you did all day. I know it was the case. As educator and involved in the GP training programme, I actually did practice visits throughout Northland. Anyway, largely was pretty much just confined to general practice. (P2)

... jobs I’ve done in other places in New Zealand were well defined as general practice or rural hospital. So,[place name] general practice is general practice, it is rural general practice but it’s still general practice.(P7)

All participants differentiated between this “normal” General Practice and what they did additionally at Hokianga: hospital based work, in-patient care and emergencies:
...each of us were always involved in the work of dealing with the in-patients. Certainly from a Hokianga point of view, each of the doctors is involved with the A&E side. They have to keep up to date with how to deal with medical and surgical emergencies, and not just call an ambulance. I think some of the scope is beyond what is normally seen in core general practice. (P2)

Rather than something entirely new, the permanent doctors at Hokianga tended to see RHM as part of their long-established Hokianga scope (that had now been named):

it’s helped us as clinicians think that through...and help clarify that there is an extended scope, whereas before - this is what was expected of GPs - whereas I think now, no-one would think that, and people come into it knowing that this is a rural hospital doctor plus GP. (P11)

Another view articulated was that the scope in Hokianga was traditional “General Practice”, and it was due to a narrowing or restriction of the General Practice scope in other settings that now made it different:

Basically you’ve got a hospital which is managed in a community. The question is, who is the medical officer? There’s no reason at all why it shouldn’t be a generalist... a General Practitioner, and these days preferably a General Practitioner with the added interest, and possibly the added support and the added qualification, because urban practice is now changed. (P4)

Younger doctors had come into their postgraduate training with the two scopes (General Practice and RHM) clearly differentiated and were undertaking the two training pathways together, as a dual fellowship. They identified themselves as rural doctors or rural generalists rather than rural GPs:

I’d say I’m a rural doctor, really. I often say part of my work is a GP and part of my work is in the rural hospital. (P6)

KB: When people ask you - what do you specialise in; how do you explain that to somebody?

I don’t...Don’t try. They always say, oh are you a rural GP? I go: no. (P7)

The Hokianga nursing staff also saw their doctors’ practice as different from that of other GPs:

I think it’s more than being a GP in a GP practice. They need a much greater scope of practice, and be really competent at those skills. Whereas, someone coming into a GP practice can be seen and sent on, here we have to treat, stabilise and manage. (P10)
The terms “primary” and “secondary care” were used mainly by younger doctors who saw the term “primary care” as the General Practice aspect and “secondary care” the hospital aspect of their work. Older established Hokianga doctors were less likely to use the words “primary” and “secondary” in the same way that the younger doctors did, rather they saw the scopes as more blurred, as being comprehensive primary care:

I do general practice and I see really pure general practice patients and I do that a day-and-a-half a week of clinics, I really enjoy and value that, that’s very much sort of 10-15 minute appointments of people coming in with primary care level problems, and for me that means everything right the way from sort of heart attack to the psychosocial problems or just kind of concerns about parenting. When I do my on-call in the out-of-hours, which is where I do my rural hospital medicine, which is again a sort of broader scope. In the way we organise it here, that’s a mix of rural hospital and primary care on-call. There’s a very blurred line between those two, but I do think of them as different scopes. (P11)

All participants saw the work at Hokianga as the scopes of General Practice and RHM medicine rolled into one:

I think you want a really good primary care doctor... who’s switched onto that third of our work as a primary care doctor, around psychosocial aspects of primary care, So, a really good primary care physician. I think the rural hospital stuff, to be a fully competent practitioner, really we should have that hospital scope as well, and I think we don’t always get that. That’s harder to come by, but essentially I think you do need both of those scopes to function here well… (P11)

While working at Hokianga, doctors doing their dual General Practice and RHM fellowship training were able to experience first-hand how aspects of both scopes came together in the daily work. They found the integration made sense and were not the least bothered by it, on the contrary, they liked it:

Here it is very integrated, we look after everyone no matter what they come with really and yeah .. I did 6 months rural hospital and 6 months rural GP [training] run here but I did them all mixed up together and that worked really well ..you just see everyone and don’t think about the separation which is quite nice. (P1)

It [Hokianga scope] totally goes across both disciplines - both the rural hospital and general practice discipline, really. In fact, that’s not an accurate way to describe it. A more accurate way to describe it is generalist rural medicine, and there’s really no distinction for the day to day work; there’s not really a lot of distinction between general practice and hospital work. (P7)

RHM brought to Hokianga a specific focus on the in-patient and emergency care aspects of the clinical work as more than an extension of General Practice, requiring a different approach:
To me the radical change in the way we practiced ... a precursor to the whole rural hospital medicine programme. That was a change from –[before RHM], the hospital was much more integrated within our ‘general’ practice, and we actually - I won’t say we didn’t take it seriously before, because we did, but it became much more organised, and it was much more organised for the patient. (P9)

Younger doctors challenged what they saw as the “GP mode” approach for hospital side of care:

I wonder if everyone understands the whole scope. I get the feeling that some are more general practice oriented and probably less of the doctors are in-patient focussed, or that some may have got a bit out of date with some of the in-patient management, with the technical side. (P7)

The importance of clinical safety and best practice in the hospital was well recognised both by long-serving doctors and trainees:

Rural disadvantage can lie in distance to secondary and tertiary care so that well educated rural hospital generalists have a critical role in minimising inequity of care and opportunity. (P9)

Participants described the hospital side of their work as varied and complex with a different daily rhythm, skill set and case mix from General Practice:

the mornings...the hospital rounds...so you had everything that made it to staying in hospital. The first day we had a severely unwell chap, I think he was septic ...and shipped off to Whangarei. So we had those extremes through to people who were just mildly unwell, but weren’t quite managing at home. It would be good to look after those people on the ward... You could have people who are rehabbing from strokes or post-op stuff come back to rehab. (P6)

Typical hospital ward day umm, yeah lots of cardiac failure, lots of chest infections, pneumonia, exacerbations of COPD um wounds, chronic ulcers, pain management...palliative care. (P1)

The younger doctors on the RHM training programme, rotating through different rural runs around the country, found the scope at Hokianga largely the same as RHM practiced in other rural hospitals around the country but also recognised aspects in which Hokianga practice was different:

one striking difference [Hokianga compared to other rural jobs] is the fact that we [another rural health service] have barriers between primary and secondary care, because I’m the only person at the moment [in a southern rural region of NZ] that’s working across that spectrum; everyone else is either a primary care or secondary doctor. So - some do, but a lot of them don’t appreciate the other side of the fence, in both directions. So you have disgruntlement or negative
comments about the other side of the fence, which wouldn’t happen if people were working across both areas. So that’s one thing I think can affect relationships, which is a real shame. It can affect efficiencies; you’ve got different IT systems, you’ve got different people seeing the same patient for the same problem on the same day.

the secondary care based doctor [full time RHM] certainly has a different skill set from a primary doctor [GP], and because they’re always in secondary care, then their secondary skill set is maybe more polished than someone who’s trying to cover both scopes. (P6)

Anxiety

All participants expressed a degree of anxiety when talking about the hospital component of their work. Older doctors reported feeling worried that they were not “up to speed” in this area of their practice. Doctors worried about consequences to their patients, or how the skills (or lack of skills) of a doctor could affect care for their community:

The rural hospital stuff; I had quite a steep learning curve when I first came here, and I felt like I was okay, and probably looking back now I wasn’t quite as okay as I thought - probably took me a triennium of the training and doing the APLS [acute paediatric life support course], and some of those courses, and actually just getting experience of systems, and then also learning the local context. (P11)

Most participants expressed some anxiety about being on call:

Yeah when I’m on call I always... I don’t sleep very well I always think of what might be coming in through the door. (P1).

Participants also felt that the presence of the hospital reduced anxiety, one participant arguing:

If you didn’t have the [hospital] ward you’d need even better doctors in the area. (P8)

The hospital provided a safe and appropriate place for further clinical assessment and care including a period of observation with a wider collegial team:

Really, without the backup of the hospital —with our distances, it would be too stressful to work here for anyone with any aspiration to quality. As you know, in medicine there are just too many unknowns. Just for example; you get a kid with a fever from across the harbour - what are you going to do? You’ve got the clinic; oh well she’ll probably be alright. All that night you’re worrying; did I do the right thing? Whereas, with the ability of putting a kid in hospital for observation, you can sleep easy because if everything turns out - it wasn’t anything to worry about, the kiddie goes home the next day - no-one’s any worse off. That’s the same with all sorts of conditions. ...You just don’t know how it’s going to develop. (P2)
...it [the hospital] adds this dimension of ...that dreadful dilemma grey area, which is awful as a rural GP without a hospital; you have to take the chance and say, is it safe for me to leave this person at home, because quite honestly it’s going to be a hard sell to the [base] hospital. (P4)

What was lost?

Some participants, having experienced a more restrictive scope of clinical practice over time, expressed a sense of loss:

Many things have been lost in the world of rural generalism. Operations were done, anaesthetics administered, complicated obstetrics was practised. Now we are not as remote and procedures which were once permissible and essential here are no longer sanctioned as safe and appropriate to be done in our hospital. (P9)

The introduction of defined scopes of practice (General Practice and RHM) and the associated increased requirements in maintaining theses scopes meant the work at Hokianga had become more divided, with individual doctors now tending to have a focus on either the General Practice or RHM aspects within the service. This was perceived by some as a loss and an inevitability:

So, that’s the needs of the organisation today, but I must say the communication - it is entirely possible for our doctors in Hokianga these days, not to talk to another doctor through the day. We were regularly debating with each other with the patient present, and that was one of the positives of not having anybody dedicated to the ward. If Patient A was Dr B’s patient - if there was a problem in the afternoon, Dr B went back to the ward and sorted, or if Dr B admitted a patient to the ward, he would make sure that it was a hand-over...So, the change has come about with...[the RHM scope], and it’s too easy, I felt, for me to walk away from my patient (on the ward) and leave it to the ward staff. Perhaps myself towards the end of my career was happy for the ward to take responsibility. I’ve got enough to do, thank you. (P8)

3.3.4.2 The “right” training (for what I do)

All participants agreed that there needed to be more or different training for practicing in the Hokianga setting than what General Practice training offered. Long serving doctors, confident that their own training pathways had been appropriate and targeted, did not think the current General Practice training programme met the needs for doctors going into rural practices like Hokianga:

if you’re in a rural hospital that does take - and I think just about everyone has to deal initially with whatever comes in through the door... I think it’s really important that there is extra training. (P2)
For some there was a sense of General Practice training having neglected (or failed to carefully consider) the needs of doctors working in a geographically isolated context:

Certainly found when I was duty doctor there were times when I felt that I was quite rusty, and that was one of the things that made me feel that I should stop doing it…. I think I could still deal with most trauma and surgical emergencies, but certainly in the realm of medical emergencies, and some of the trauma things, things have moved on from my training. I wasn’t current as far as that was concerned. While I think lip service is paid by the normal general practice training towards those in that you still have to have done your Level 7, is it? (P2)

Factors that may have influenced this perceived need for change in training discussed by participants included the premise that “the in-patient care has got a lot more complicated” (P6), with more treatments and diagnostic investigations available:

At a time now when so much more can be offered in terms of interventional medicine and when it is possible to survive and recover well from conditions which once would have had major implications in terms of both mortality and morbidity. (P9)

and that with this people’s expectations of what medicine can offer had changed:

...because now people know there’s more stuff available out there, - that people can be saved from heart attacks - they can be saved possibly from a stroke - they can be saved certainly from infection that they ordinarily wouldn’t have been saved from. So, people do know that. (P9)

Another factor mentioned by several participants was the current expectation that doctors start vocational training early, whereas previously after graduating doctors often took time to gather experience and learn skills usually in big busy urban centres, before going into a focussed General Practice training programme and rural practice:

Essential to those wanting to work in a place like this - have exposure to lots of cases before going rural - ideal would be a small base hospital for a few years - several years more than what some docs are getting prior to going into GP, need to have seen lots of patients across acuities and with responsibility- not just watching…they’ve got to spend more time in the places where the action is. (P8)

The majority of participants agreed that dual General Practice and RHM training was the “right” training - the current best fit for Hokianga:

For here would be very good to be dual trained – GP and RHM...the GP is a large part of it and it is so integrated. (P1)
I think you need to have completed the entire GP programme and the rural hospital training to really be able to have acquired the technical skills of working here. (P7)

You need to have an awareness of what a rural hospital can do. So, even if you’re working largely in the clinics, you need to know the rural context, to deal with all those issues about appropriate place of treatment, and transport. You can’t escape from that, actually and I don’t think many rural primary care physicians can, because they’re always going to be faced with the sick child in a peripheral clinic, and you’ve got to be able to manage that for an hour and a half. I think there are always going to be people who are going to bend one way or another. Anyone who stays here for any length of time needs to develop both of those scopes, I think that would probably be true of anyone working in an integrated primary care rural hospital care. (P11)

Younger participants were confident that the dual General Practice and RHM training, with the flexibility it offered, was the “right” fit for rural jobs generally across the primary-secondary spectrum:

Now there is a pathway that you can work out yourself to acquire the skills that you need for something like the work that you need to do in Hokianga Health... and you do need the formal training to be able to do that [the in-patient care] confidently and efficiently. That’s the benefit of the rural hospital training. I think the dual training is beneficial. It’s beneficial in both directions: it’s beneficial for the person in primary doing hospital work - to be dual trained - it’s beneficial for the GP to be dual trained. (P6)

It is interesting to note that the younger participants appeared somewhat puzzled as to why this question ("what is the current best training for doctors wanting to work at Hokianga?") would need to be asked.

3.3.5 Theme 2: “What we do”: the importance of the hospital at Hokianga

3.3.5.1 Our Context

In the 1990s with Hokianga health services reformed as a community trust, an inward focus had been the emphasis. This began to change in the 2000s, with the organisation realising the importance of articulating to those outside who they were and what they did:

...when we first started as an organisation as an independent trust in 1993, we felt that all we had to do was defend our boundaries and we didn’t have to worry about what was going on in the rest of the world; as long as we got our act together here we were going to be okay. We soon realised that wasn’t the case - that we have to demonstrate who we are. (P5)

The majority of participants saw the role of a doctor at Hokianga as wider than a clinical skill set and the role of the hospital as more than the provision of clinical care alone:
The understanding of context, yeah and the ability to be flexible and to cope with that set of context. The medical intervention is quite a small part of medical treatment, isn’t it, often? It’s about being able to observe, have a place of safety, and have a place of recovery as well. (P11)

I think it’s about... the hospital’s been here forever, and it’s that little place on the hill. It’s a visual thing when you come across on the ferry, or when you come into Rawene; it’s a little place of safety. People often say that; oh we feel safe here. (P10)

There was discussion by all participants around the wider context of healthcare at Hokianga including geographical aspects, limited resources and socioeconomic deprivation and how these influenced access to health care, as well as the effect of place on health:

Looking at the geography of Hokianga still with poor roading...the fact that people don’t have petrol for their cars - don’t have a legal vehicle - don’t have an easy way of getting across the harbour at night. (P5)

All participants argued the importance of access, for the health service to have appropriate resources, including the right workforce and equipment, to offer quality hospital care for people in “their own place”:

The effect of place as well, in terms of in-patient beds - not the really sick people that you transfer off, but the ones that actually stay in the hospital which is probably in the outside world, the part that’s least understood. So, emergency transfers et cetera; there’s been a good understanding of that, but in terms of having a service that’s high quality, that’s in Hokianga, people can stay in their own place for things that don’t need to go out. (P2)

What was normal practice in a town, for example sending a patient on to the base hospital emergency department, in many situations would not make sense in Hokianga:

In this kind of context you have to have that ability to treat people for 24-48 hours when you’re this far away, because it just makes so little sense to send many people away. (P11)

Well, it’s expensive isn’t it? not just the travel but the whole dislocation of the community of family to provide the support. (P5)

3.3.5.2 Our Role

Clinical Breadth

Though emergency or acute care was a big aspect of the hospital’s role, participants emphasised the hospital’s wider scope:
The ability of the hospital to provide care from birth to death, to offer obstetric and palliative care as well as care for the whole of a life between these two transitional periods means that Hokianga can provide truly holistic care – and truly integrated care. (P9)

Participants described the continuity of care provided locally for patients and family from home to clinic to hospital and back:

... We know the ones we need to keep - the ones we’ve safely sent home because of who they're living with, and they’ve got support. If you have to go to [XX another rural hospital], they’re likely to get kicked out at midnight, with no way of getting home. They don’t have their family – they [the other health service] don’t know where they live. (P10)

Hokianga hospital also facilitated safe discharge home of people transitioning back from city hospitals, for instance after a surgical intervention or time in intensive care, local knowledge ensuring that the right services and care were wrapped around them:

The number of times we see people discharged home from [Base hospital] ... and it falls apart within 24 hours, and they're back on our doorstep because they haven’t been able - it’s not through any lack of competence; it’s just that you’re too far away to make a plan that makes any sense. So you have to get people a bit closer to home and then plan the step home, because the family haven’t been involved. (P11)

From disposition decisions (i.e.: admit, discharge or transfer) to end of life care, participants discussed the roles filled by the hospital that in many other places (in towns, in bigger populations) were likely to be distributed across different health service providers:

Because you can travel the whole journey with your patient in your rural area. If you go to hospital you can keep them there, and all of a sudden you get these breaks [in continuity of care] and every time there’s a transition of care, there’s risks around that. (P6)

That’s what you see, even in the patients who are less acute and less sick; they really don’t want to go out. It’s a huge upheaval when you send them two or three hours away from their family, from their support, to a place that they don’t feel comfortable, to people that they can’t communicate well with. You can see a lot of practical problems - communication - just the physical distance is a problem, sending people out of the way, and then the cultural aspect; you’re creating a cultural barrier with people going to hospital accessing the service. You break that continuity of care that we do have here. (P7)

Participants also highlighted roles of Hokianga hospital which extended beyond what would be considered health services in a city:
If you’re in a town, there are a range of different services as well where ... from a mental health point of view, you could walk into the refuge in Whangarei; there isn’t a refuge here, so if you’re actually now running away from a violent situation, we provide one of the only - other than sort of social family and friends which are not always available - we provide one of the only places that you can come and be safe. Whereas, in a city that wouldn’t be health services that do that necessarily. There isn’t anywhere else here. So, those kinds of things - a whole range of stuff that we do, that you wouldn’t need to do in the city. (P11)

The breadth included cultural aspects integral to care:

Yeah, remember our hospital has its own little Marae...that’s your end of life journey, in however way you want it. One old lady, her whole whanau, all her grandchildren were in there with her, and they would sing hymns in the morning, sing hymns at night with her. They were all around. She was happy with that, and she did pass in time...that’s what whanau is. So you have the outpatients, you have the in-patients, and from us we have that extra bit, and it’s all part of the care. (P3)

Navigation

Ease of access to health services was seen as a key aspect of the Hokianga model of care: when people had a health problem whatever it might be, regardless of the acuity, they knew how to access the service. This approachability of the local health service was seen by participants in itself having wider positive health effects:

I think that’s fundamental to the importance of the hospital in the health service in Hokianga; the fact that even if they don’t use it, people in Hokianga know that if anything goes wrong - if they’ve got any problems, they know where to go - they know how to use it. So, it contributes to the wellness of the whole population. (P2)

Assisting people to navigate the wider health system, across the primary secondary tertiary interface, was seen by participants as an integral part of the doctor’s role:

That doctors are connected somehow to the system, and know everything about all the tests and investigations, and that’s just something we have to work with a bit, and try and use the support systems...I don’t think people here in this context have a problem with that, because they understand that the service does everything from primary care and rural hospital. They just see that and they expect that, and that’s been the tradition for many years. (P11)

Participants felt that the assumption from the Hokianga community was that their doctors had the right skills for the job. There was thus a responsibility for doctors to be linked in with and beyond their own clinical scope: to be aware of and up-to-date with diagnostic and treatment options ensuring, for example, that Hokianga hospital patients had the same access to
diagnostics and specialist opinions as those admitted directly to a big urban hospital. The majority of participants saw this as a key part of RHM training:

*it’s part of the rural hospital training isn’t it; to not just deal with the problem at present, but also think about the potential deterioration, and actively plan for it. That’s to do with transfer: when to transfer and what mode you will transfer, and all that is, as part of the RHM training, pretty important. Very important skills to be able to run - I mean, this hospital can’t exist without Whangarei - without Auckland, without those tertiary services, but the clinicians here need to be aware what those services are, and when we need to access them - when it is appropriate.* (P7)

Participants all agreed that the integrated nature of the service meant Hokianga staff responsibility did not stop when someone was discharged or transferred from the hospital ward, “it is still our problem”(P10), people, patients and staff all understood this:

*that’s what I really like about working here; you can actually see people as a whole, and treat everything. Sometimes we find things that we can’t deal with at that time, but we can organise things like clinic appointments, home assessments and things like that, to be dealt with later.* (P10)

**A Package Deal**

All participants saw as integral, interwoven rather than add-on, the role of the hospital within the Hokianga health service, a package deal:

*It’s a complementary set-up, and once you take either arm of that away, it’s like a pack of cards; the whole thing will just fall over.* (P2)

*It’s one service, and that’s how people would see it. They’d go to the same place basically, in the same service as to whether it’s in the middle of the night and it’s acute pain, or they’ve cut off a limb or whatever, and if they just want to go and follow-up their results; that’s the same thing.* (P3)

Not surprisingly then, all found it difficult to imagine the service without a hospital:

*It’s very difficult to separate it out. It feels like it’s part of the continuum, but it would be a fundamentally different service and - I think we’d have to relate to a rural hospital centre of some kind if we didn’t have one here, and I just can’t actually envisage geographically how that would work.* (P11)

*If you had your peripheral clinics and you had a health centre at Rawene, but you didn’t have any in-patient beds...well, it would just be a primary care service I guess. I don’t know whether we would be able to sustain - there would be less incentive as a community to sustain that... for it to just be a general practice service.* (P5)
3.3.5.3 Home

It’s another room in the home - just another room. (P3)

Nationally the term hospital was generally understood to mean an institution providing healthcare that is separate from community care and from primary care. Hokianga hospital was not viewed by participants in this way:

They don’t describe our hospital in the same way they describe the DHB’s hospitals. To them it’s an extension of their homes... coming back here is like a step way back into what they’re used to; the environment, the people that they know. (P5)

She [a patient] said she had to go to Whangarei to do that. Then: “I couldn’t wait to come back to Hokianga for the service, to recuperate”.... They’re saying the same thing, nearly all of them were saying the same thing: alien ...and homely ...aye ... the difference. (P3)

Several participants commented that the community often used the term hospital interchangeably with the whole Hokianga health service:

The whole community’s identity is associated with it, and people will often describe Hauora Hokianga, this wide-ranging integrated service as being the hospital. So they interchange the words from a comprehensive service to being the hospital, which is quite interesting. It’s almost like there’s a completely different attitude to the word hospital in our community. (P5)

The concept of the hospital as “home” was mentioned by all participants:

In one way the hospital is like a home away from home. A place where the person is recognisably the individual that they are and where they have a sense of belonging and the ability to communicate their feelings about what is right for them... allows for patients to remain within their own home territory so to speak and either be cared for with a level of care that cannot be provided at home or to be assessed and transferred to a more appropriate facility in a way that is user friendly and enables both the patient and his/her family to feel as confident as possible about what is happening to them. (P9)

Participants attributed this concept to the wider Hokianga context, the people and the place, its history and the principles of the service, including its governance, integrated care, no charge for services and patient centredness:

They own it. The community owns this place, so they have a say from a governance perspective, from a - it makes a big difference when you can change and influence the whole of the operation of a place. (P10)
3.3.6 Theme 3: “On the fringes”

3.3.6.1 Mismatch and vulnerability

Participants were conscious that Hokianga Health (with its integrated model of care; doctors working across both GP and RHM scopes; its funding model and small size) was different from the majority of NZ rural hospitals and rural health services:

Wherever I go elsewhere, and I go to the rural hospital doctors’ meetings, and I go to the GP meetings, and I’m only ever talking to half of the conversation, and the other side, and they don’t kind of ... no-one quite understands our context, I don’t think. (P11)

Participants suggested that because their model of care did not match the norm, this could lead to a tendency for misunderstandings, misperceptions and more intense external scrutiny than might otherwise be the case:

They look at the Hokianga and it feels to them like it’s the wild west and it’s kind of, ”there be dragons”. By and large I think they’re quite supportive of us doing that. I think there’s quite a range of views within that. There’s some perception of us having some kind of special treatment and there are some misunderstandings of what we do, and the nature of the model and some resistance and resentment of the model, but that’s not the majority of it. The vast majority of actually... is that they’re kind of quite admiring of the model and the integration, and they know the people largely have a good experience.

I think there is some concern out there about, do we keep the standards. Because we step outside the standard model it’s then - people look at it and think, well are there gaps in that then - are they not doing the right thing?

We’re not asking for quite as much special treatment as it looks like, because we’re fulfilling so many different roles. I don’t think it’s a national level; it’s a local level that people look at the service and think, well you’re getting bits from here and bits from there - why are you getting all that? (P11)

Participants were unanimous in the view that the Hokianga model was the right fit for the community’s health needs, some suggesting this was not always the case for rural health services:

It’s all based in a primary care community. For a small community, a hospital being part of that is relevant. So we’re actually leading edge on this debate, we’re pretty unique in that argument, in the country... and it’s really hard to get the support for it. (P5)

We’re the only place in [place name] out of the rural centres who are saying, our model is great - we’ve got this right - we just need to sustain it. Everyone else [other regional rural health services] is saying: we can’t sustain this - it’s the out-
of-hours particularly is unsustainable and it’s not working, and we need to re-design it. (P11)

Most participants described that Hokianga having been part of the RHM development had led to a better understanding of the model of care from those outside leading to more confidence in (and perhaps less scrutiny of) the service.

Medical participants found it challenging to fit their everyday practice into the systems and processes of external regulatory bodies and this brought with it a sense of unease. Most participants felt that while there was some understanding at the RNZCGP that rural practice sat along a spectrum of General Practice through to RHM, the reality of the rural context was not well understood or catered for. The integration of the two scopes at Hokianga was complex, more like an intricately woven mat than a linear spectrum. General Practice skills were applied in the hospital ward, hospital skills were applied in the peripheral clinics, skills of both scopes were practiced within one consultation or scenario in any part of the service at any time. Participants describe the particular challenges that this posed for them:

*One of the things that’s really challenging for us is that we have to create a system where each staff member is well orientated and well integrated, and understands their role, and at the same time, match up with the professional, collegial .... requirements that really don’t match our needs. So we’re having to kind of fit to one slightly artificially - it’s just that we don’t match the scopes of the average - that the college envisages. So we have to meet their requirements, which aren’t always appropriate, but at the same time they’re mandatory, because if we don’t do them, we can’t function. ...to make sense of that.... this is the ‘right’ practice but actually what we really do is this, because that’s what is right and makes sense here. That kind of leaves, especially the younger staff members, and the staff members who are coming in from overseas who aren’t familiar ...it’s quite a difficult thing to understand. (P11)*

Participants suggested that these same issues were not always easily communicated or well understood within their own organisation, posing a further challenge in ensuring much needed managerial support:

*I’m not sure they [management] understand that, and how much staff time and resource it takes to do it properly, and how much actually we kind of wing it a little bit, and how that kind of leaves this profession vulnerable.(P11)*

Several participants commented on what they perceived as a wider national misunderstanding at the organisational level of their model of care at Hokianga:

*In a sense it doesn’t matter whether you’ve got a separate doctor doing the ward or separate doctor doing the practice; the point is that you’re in an organisation*
that is covering the whole thing. There’s lots of barriers to that working well in New Zealand. (P4)

I think it’s a bit that there are a huge number of national organisations that are monitoring and regulating for organisations that don’t look very much like ours, We are going to be on the fringes of the model, and that’s okay, but they’re not very flexible. (P11)

Participants reported frustration at the duplication of processes created by the new RHM scope. For example accreditation for half of the service (the health centre and clinics) was through RNZCGP Cornerstone and for the other half (the hospital) a separate accreditation process by a different organisation was required. Reflecting on this one participant said:

Maybe there could be - especially if they’re... given they are both under the umbrella of the Royal College of GPs, is that maybe there could be a bespoke process for those institutions, which would encompass both, rather than having to do them entirely separately. (P4)

Several participants were well accustomed to duplication across the whole organisation’s processes and somewhat resigned to the proportionately large time and resource requirements for a small integrated service and workforce:

Because that’s a bit of a norm for us, just adds to another layer of problems that we face as an integrated provider, we have to double up everywhere - triple, quadruple up in so many areas because we’re integrated. Nothing gets designed around our model. Everything gets designed in discrete lumps of what we do and yet we have to comply with everything. (P5)

3.3.6.2 Undervalued

Participants commented feeling undervalued as a health service, particularly those who had worked for a longer time at Hokianga:

Hokianga …always felt under threat from the centre ….who never really appreciated the sort of service that we provide, and there have been times when the whole concept has been quite severely threatened. (P 9)

If we were owned by the DHB or the Ministry, we wouldn’t even be here. (P3)

All participants felt more valued (as individuals but also as an organisation) with the recognition of RHM as a scope:

I’ve felt for a long time that calling rural - basically the medical staff of vital rural hospitals - calling them MOSSs has been somewhat demeaning. These doctors are specialists in their field, and it’s really good with the division of rural hospital medicine to have them now with a proper designation. I think that now rubs off in that I think the status generally of rural hospitals is enhanced by the sense of
status that these clinicians now have. I think it’s so much less easy for politicians and people in the larger centres just to dismiss this; oh well these are only MOSSs running these small beds, these GP beds, or whatever they call them. (P2)

Long serving staff had been through at least one external review of their service and were conscious of an ever present threat to the service and model of care. They were well aware that sustainability depended on external funding and regulatory bodies understanding and supporting their model. While this was challenging in an environment, regionally and nationally, where few similar models existed, there was also awareness that this was not a new issue for rural health services on a national and international level. As one participant commented:

*It* [rural health] has always been marginalism as to whether it’s sustainable, for the last 100 and something years... - yeah, because what else can you do? Are you going to stop providing rural health care? *This [Hokianga Health] isn’t a model that’s been dreamt up overnight; this is one that’s evolved over 50 years.* (P10)

Participants, including the younger generation, expressed distrust in the national regulatory and funding organisations, alluding to a mismatch of the high-level goals touted and what actually happened on the ground:

*There’s a strategy through our DHB [in another region of NZ], probably same in yours, about treatment closer to home, but it seems to be sort of a lip-service thing sometimes, and at the end of the day they’re trying to get bang for their buck. I think if health was seen as looking after the patient rather than just getting through their protocols and systems, then the DHB would do things differently.* (P6)

Participants also commented on the urban-centric decision making of large institutions including universities. As one participant put it:

*They [Universities] should appreciate rural hospitals, and how important they are to the training for post-grad rural, but again they’re similar to DHBs. They’re big institutions. Traditionally both them and the DHBs are focussed around tertiary or secondary care models. Decision-making comes often from those levels.* (P6)

### 3.2.6.3 Not belonging

While Hokianga doctors worked across GP and RHM scopes, in the majority of rural hospitals (both in Northland and nationally) doctors worked in the RHM scope alone. Having gained a sense of belonging through the introduction of the RHM scope and growing rural hospital networks, Hokianga faced the reality of keeping up with “dual scopes-dual systems” regulatory processes for their individual practitioners and their service as a whole. Participants
were well aware that Hokianga hospital was at the small end of the rural hospital spectrum. They worried that if the large rural hospital (with a RHM alone workforce) came to dominate direction and processes within the DRHMINZ, they might not be able to keep up: to keep belonging:

*You need to encompass that [bigger rural hospital with a CT scanner], but you also need to encompass the one doctor and two nurses at night in Rawene - with you and a stethoscope and an ultrasound machine.* (P11)

Participants argued that regulatory bodies and networks must remain inclusive, taking into account different rural contexts. They worried about the potential consequences to their community if smaller rural hospitals no longer belonged:

*in which case, that would mean, , that this kind of service in this kind of place would be fundamentally different from what it is, and my opinion, would be to the massive detriment to the health care for people in some of the most vulnerable areas. The community very clearly want there to be a hospital service here, but they want it to be high standard, and want it to be well supported.* (P11)

*... it is important that at least half of us are [RHM trained] so that we know we can provide the service we should be able to and so that our funders are confident in the service we are providing.* (P 9)

### 3.3.7 Theme 4: Survival

#### 3.3.7.1 Benchmarking:

**Commitment to Clinical Safety**

Participants saw the new RHM scope as bringing a positive change at Hokianga hospital, improving both the quality of - and access to - health care. For participants who had been involved in the 2007 and 2013 external reviews of the service, RHM providing targeted training and support was identified as having been essential to ensure clinical safety at the hospital:

*I could see a future where … when the clinical safety, the medical skills of our workforce was going to become an issue. So we know that to sustain it, we’ve got to do a whole bunch of things, but one of them is a trained-for-purpose medical workforce… if it had been shown [in the external review] that our clinical services were not up to standard, and that staff have not being trained for the purpose of the acute hospital, we couldn’t have defended that. At that time it would have been the end of our hospital service -without that we didn’t even have a foundation for what we were on about. Thank goodness the rural hospital medicine pathway came along when it did.* (P5)
Recently added diagnostics (for example laboratory point of care), already established at most other NZ rural hospitals, and hospital-focused training, supported the RHM scope and the ability to meet the required standards:

> Things like getting an up-to-date defibrillator... point of care lab, ultrasound - all of those things have happened. I think we’re actually quite well placed, we’ve got good equipment. We have staff that can use it. (P10)

> ...point of care testing. All of a sudden we got a couple of new pieces of technology. Digital radiography did the same. That then reinforces the clinical safety. (P5)

Participants talked about the importance of these diagnostics and the focused training for their clinical decision making:

> Severe pneumonia – staph aureus pneumonia, just on the weekend, helicopter transfer and all. Yeah, turned up at the door; severe respiratory distress, grunting, could hardly speak. Put him on CPAP[continuous positive airways pressure] and called the retrieval team to come up...Yeah, and used everything we’ve got here, actually: full blood count, troponin, BNP[b-natriuretic peptide], blood gas, ultrasound, ECG. (P7)

> By having the X-ray that meant ... I could say to the orthopaedic people that she is coming rather than ...can you please see her and assess her and x-ray her. (P1)

> All that takes training. It’s not just getting a new piece of equipment and saying oh look we’ve got this. For the ultrasound, the doctors had to go and do all that training. The defib... and we’ve got to continually use them, so we know what we’re doing when we do need them. (P10)

Participants discussed their commitment as individuals and as an organisation to attain the same standards at Hokianga as other rural hospitals, cognisant of the challenges with their small size as well as the integrated care:

> If we’re not doing the best practice then we shouldn’t be doing it. Without some of those things [training, diagnostics] we probably couldn’t be here, or we’d be here but we’d be in a different situation. We wouldn’t be able to manage the patients as well as we do... if everywhere else is doing it, why shouldn’t the patients at Hokianga have the same? and keeping up that we’re calling ourselves a hospital; therefore we are a hospital. We should do it. We have to do it, otherwise we’re not a hospital, eh? (P10)

> So you have to look at what this hospital is doing in the context, and then looking at, well does it have to do this? Yes it does. Does it have to do that? Well, yes it does. If it does have to do these two things, is it actually able to do them safely? Are they supported? Have they got the kit? Have they got the expertise? That’s what that’s about. (P4)
Cost of benchmarking

The costs involved for the organisation that came with the RHM pathway, were seen by some participants as a non-negotiable investment, considering the consequences of the alternative, i.e. if they had not invested in the RHM pathway:

_We...invested more in the medical care in our acute hospital - more money to that than we had done in earlier years. It actually did extend the total FTE [full time equivalent] of staff, but we had to. This was foundational to what we’re doing, so we couldn’t not do that. Really, in the scale of what it’s given us and the benefit it’s given us, from a knowledge to a sense of security, has been huge, and worth any extra expenditure that we may have incurred._

_There is some pressure because of course the more investment that’s made by your staff towards improving their skills and knowledge; that does put pressure on the wages, because rural hospital medicine has become a specialist scope of practice, and the DHB and other hospitals... with the ASMS [Association of Salaried Medical Specialists] - just Hokianga trying to keep up with that pay packet._ (P5)

Many participants saw time resource as the biggest cost, with the small workforce facing multiple requirements across the integrated scope and service, this being particularly challenging for a small community trust run hospital:

_The challenges lie in being able to stay up to date, of being able to meet all the standards ...in a timely way and for the Trust to be able to fund doctors in order for them to meet these standards._ (P9)

_When I think of time, it’s almost the same as money. It’s about workforce, isn’t it, and about having a sufficient workforce, and actually for us I think it’s about having a sufficient workforce that can cope with a slightly extended scope, so you’ve got the time to do that, and also allows us to have people coming through as trainees and new doctors, and allowing the people who have been here for a while to have that sort of mentoring and teaching role. I think we also need to engage upwards, and out into the debates at national level. That takes a bit of imaginative funding, and probably doesn’t want to come from service provision as such. I think it’s difficult, because we are saying there’s this sense that we’re asking for special treatment; we kind of are._ (P11)

Several participants envisaged that while ideally for the future all doctors at Hokianga would attain and maintain dual fellowship, this was likely unrealistic given the costs:

_I think that it is unlikely that we will have a group of doctors who are all dual [General Practice and RHM] accredited but it is important that at least half of us are so that we know we can provide the service we should be able to and so that our funders are confident in the service we are providing._ (P9)
3.3.7.2 Growing connectedness

A building together of strategic alliances (P5)

The establishment of the scope of RHM had brought for the first time a national focus on rural hospitals. For Hokianga being part of this development reduced the sense of isolation:

Just being part of that hospital network, rather than before, like when we first came, Rawene was out on a limb, and you didn’t get involved. (P10)

Even to practice rural general practice is a challenge, in a different world, but for it to be acute hospital care as well, that added another layer to it. Yeah, so I was convinced at the time we need to do this, and I was impressed at that conference [in 2007] how many others were saying the same thing. So there was a sense of being not just on our own on this, and I immediately thought this was something we can work together on. So yeah, I guess we were right there from the beginning, and I guess that gave us the momentum to support it. It gave me the momentum to feel I could support it all the way through. (P5)

RHM brought a growing sense of belonging, which built confidence:

The rural hospital medicine programme has meant ...we’re part of a network of providers who have similar problems and similar issues and we can share those things. We develop our relationships with each other. That helps with workforce retention, because people are aware of our organisation and the work that we do, and perhaps interested in it. We can develop again our interests. It becomes wider again, and has more depth because we have these relationships with other groups, and we can see ourselves in that context. The other thing that the rural hospital medicine has alerted us to and developed is the networks associated with rural health. Now we’ve got the rural hospital network ...and that’s allowed [us] to break out into listening to the issues of other ...rural hospitals and seeing the context in a broader sense; getting to understand where they’re coming from has been very valuable. (P5)

Established relationships with professional colleges and universities were perceived as particularly important, fostering the development of Hokianga Health as a teaching site, now with a new rural focus:

The teaching aspect is important for our survival, for our learning too and keeping linked in to a wider network. (P9)

Participants considered these linkages with the “world outside” of key importance in harnessing support for their model of care and ultimately their survival:

It helps with our funding - with our relationship with our funder, because they do respond to profile. They do respond to how we’re seen in the rest of the world. (P5)
3.3.7.3 The right language

Participants discussed nomenclature relevant to Hokianga Health, pointing out meanings of words and phrases that had changed over time. The same term could have a different meaning according to context and the choice of word/s could have wider implications and potential downstream effects. Participants argued that there was a need for Hokianga to be sagacious in the use of language in order to stay “plugged in” with regulators and funding bodies. An example given was the term “GP beds” (versus: “rural hospital beds”).

*It doesn’t seem that long ago they were talking about GP beds, in fact it was in the. … [DHB’s] plan. We had presented the idea about rural hospital medicine trained GP’s running acute hospital, and we should be focussing on that as a way forward for the future, but they didn’t understand that. It was written up as GP beds. I tried to correct that so many years later, but again they were not still not quite sure of it. Yeah, and there was a time I was tempted to use the word GP bed, but I soon realised that was dangerous, because it was seen as being just an overnight stay, of lesser quality, lesser value than…. They [name of a rural health service] lost their acute hospital service. They used words like, oh we’re a GP overnight bed service, and made a mistake. Funding got cut for that, and they no longer have an acute service. (P5)*

Another example provided by participants were the words: “primary care” and “secondary care”. Historically Hokianga practiced comprehensive primary care (inclusive of their hospital services). But with the Ministry of Health definition of primary care narrowing, to ensure continued funding for the (same) hospital service the wording needed to be changed:

*In the world of the DHB, that’s secondary services, but we practice the primary care model. Hauora Hokianga always did, so we were at some stage along the way calling this a secondary hospital. (P5)*

*I’ve rattled on in the past about GP hospitals, and primary care hospitals, and people say, well you can’t call it a primary care hospital because by definition it’s secondary care. Yeah, okay let’s never mind the semantics. (P4)*

The lack of clarity of language was felt to be important factor resulting in challenges and misunderstandings across multiple levels of the system:

*Think there’s a difficulty more broadly in terms of context across the country about the understanding of those contexts. People are using the same language to mean different things in different parts of the country without really realising it and so it’s quite hard for our hospital management administrators to then talk to other hospital management administrators because again, they using the same words but they don’t mean the same thing. They don’t always understand that. (P11)
3.3.7.4 Optimism

All participants saw the RHM scope positively, in bringing opportunities to better equip doctors and their hospital for practice, ultimately to improve the healthcare for their community:

we can feel confident in our GP scope of practice and also in our RHM scope of practice ...that we are able to stay abreast of what medicine is able to offer patients who are presenting with increasing complexity of medical conditions. (P9)  
I think there’s an appreciation that there’s a positive future for ruralism, if that’s the right word. (P5)

There was a strong sense from all participants of positivity: they enjoyed working at Hokianga Health. Being part of RHM development had led to the strengthening of networks and linkages, a sense of belonging and of being valued. The raised profile on a national level impacted how Hokianga was seen by funders and meant a better chance of survival. Participants talked about the wider impact of RHM in bringing a positive vibe which was felt at all levels of the service:

*This commitment to training our next generation of doctors, and rural hospital medicine programme has been part of that. That’s so critical. I hadn’t seen that at first when I started here; how important that is -not just about that doctors might come back to work in the future; it’s just the excitement of that for everybody - how that keeps everybody alert and awake and alive, feel that their job is greater than the job itself.* (P5)

3.4 Results Part III: Integration of document analysis and interview findings

In this case study two sources of evidence (documents and interviews) were analysed separately and sequentially, exploring the impact of the new RHM scope on the Hokianga health service and its medical practitioners. Findings demonstrate convergence and corroboration from the two data sets, validating the overall findings.

Themes from both analyses can be grouped into two broad overall themes. The first is the articulation of the scope of medical practice and the model of care at Hokianga Health, or: “what I do” and “what we do”, in relation to the RHM scope of practice. This formed the first part of both the document and interview analysis findings. The document analysis provided broad perspectives of the Hokianga health service (including those of external stakeholders) and historical context with focus on “what we do”. The interviews provided in-depth personal perspectives articulating both the clinical scope of practice (including aspects
of medical training) as well as the scope and role of the health service as a whole: “what I do” and “what we do”.

The second broad overall theme considers how the introduction of the RHM scope of practice at Hokianga then aligned (or not) with the external environment, that outside of Hokianga Health, or: “aligning what we do with the rest of the world and how that then affects us”. Themes and subthemes here also converged across the two data sets: alignment; mismatch; vulnerability; belonging and not belonging; benchmarking; nomenclature or the right language; connectedness; and optimism.

The document analysis, tracking development at Hokianga Health over more than a decade and including views of external stakeholders, situated the RHM development within a broader temporal view of the Hokianga service, and themes of alignment (with misalignment and realignment) come through most strongly.

The interview analysis reveals, within the same themes, rich descriptions from individual perspectives. The interview theme and subtheme titles (e.g., “undervalued”, “on the fringes” and “survival”) reflect these personal perspectives. Rather than broad challenges as seen in the document analysis, in the interview analysis issues that are more specific are explored e.g., “duplication”.

Thematic convergence is demonstrated in Figure 3.
<table>
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<td><em>II. 2007-2009: a new scope of practice and a new definition of a rural hospital.</em></td>
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Figure 3. Thematic convergence of document analysis and interview analysis
4.1 Introduction

In this section the main study findings are presented then discussed in relation to the existing literature, highlighting new insights. Finally, the strengths and limitations of the study are discussed.

4.2 Principal findings

This study provides the first in-depth evaluation of the Rural Hospital Medicine (RHM) vocational scope of practice, through the lens of one rural health service.

The introduction of the RHM scope with the definition of a rural hospital led to the clear articulation of the scope of medical practice at Hokianga hospital both at the individual clinician level and at the level of the service as a whole. The key features of the Hokianga health service and its medical practice were identified as breadth of practice; integrated community to clinic to hospital care; no fee-for-service; and community ownership.

The breadth of clinical practice was illustrated by descriptions of diverse caseloads; unimpeded movement between office, emergency room, hospital bedside and community clinic; opportunities to solve complex issues; involvement with the community; and teaching and leadership possibilities. The rural health service was conveyed as strong and innovative, providing integrated, cooperative and holistic care.

Before the development of the RHM scope there was a mismatch between the scope of medicine practiced at Hokianga and available medical training and maintenance of standards programmes: the hospital aspect of practice fell outside the General Practice scope. This created a vulnerability for individual practitioners and the wider hospital service.

The RHM scope brought for the first time a specific focus on the in-patient and emergency care aspects of medical practice at Hokianga and, with this, validation of the hospital aspect of the medical practitioners’ work.

The new RHM scope was the right match for hospital practice at Hokianga. The dual scopes of RHM and General Practice together now provided the right fit for all medical practice across the integrated Hokianga health service. While some aspects of continuity of care and breadth of clinical practice at Hokianga had been lost over time, the RHM scope meant that
continuity of care for patients across the primary-secondary interface within the single integrated Hokianga service could be maintained.

For Hokianga Health, defining their doctors’ hospital practice as RHM and their hospital as a Rural Hospital meant alignment with the RHM regulatory policy, systems and processes. Through the consequent strengthening of clinical practice and improved scope of services the continued clinical safety and thus the viability of the hospital service was ensured.

Aligning with RHM and rural hospitals brought a sense of belonging for individual practitioners and for Hokianga hospital as a member of a national network of rural hospitals. On an individual level, the provision (through the DRHMINZ of the RNZCGP) of appropriate training with its accompanying professional support systems and collegial networks decreased professional isolation and improved confidence.

With the RHM scope came recognition that specific support and resources were required to practice safely in a rural hospital. This led to benchmarking at Hokianga hospital with support in implementing national standards and resource for the diagnostics, technology, equipment and training needed to meet these standards. Hospital specific credentialing for medical practitioners was introduced and clinical governance strengthened.

The RHM movement strengthened Hokianga Health’s external strategic alliances and partnerships, helping to create a sense of belonging, encouraging benchmarking and facilitating the “keeping pace” with the changing external regulatory environment and language. Particularly important in building capability and supporting improvements at Hokianga hospital were the linkages with training programmes and academic institutions.

Study findings portray a strong sense of positivity of practice at Hokianga Health. The RHM scope, in better equipping their medical practitioners and their hospital for purpose, and strengthening supports and networks, contributing to optimism at Hokianga Health.

Challenges resulting from the new RHM scope at the individual practitioner level mirrored those at the health service level: Hokianga medical practitioners and the Hokianga hospital service trying to fit regulatory systems and processes that had not been set up with their scope of practice and model of care in mind. Working across dual scopes and different levels of care meant meeting, maintaining and resourcing multiple regulatory requirements with duplication, and at times triplication, at the interface with multiple organisations for Hokianga.

Learning the new “RHM language” as part of the alignment process was challenging, and a lack of a clarity in nomenclature or lack of a common language for rural health was identified.
as an important factor resulting in misunderstandings across multiple levels of the health system for Hokianga.

As a hospital at the small end of the rural hospital spectrum, having found a sense of belonging through the introduction of the RHM scope, inclusiveness and flexibility of the scope’s associated regulatory policy and processes were identified as crucial elements for the sustainability of rural hospital medical practice at Hokianga.

4.3 Discussion of findings in relation to existing literature

As outlined in the thesis introduction, the intention of the RHM scope was to provide standards of training and professional development for doctors working in rural hospitals and to encourage development of quality systems in rural hospitals.(1, 50) In exploring the impact of the RHM scope at Hokianga Health, the study has found that the scope has met its intentions. At the same time the study has identified some unintended consequences of the new scope.

4.3.1 A fit-for-purpose scope and targeted rural postgraduate training

The study findings highlight the critical role of well and appropriately trained medical practitioners in minimising inequity of care and opportunity for rural communities.(4, 12, 13, 15, 19, 20, 59)

The Delhi Declaration on Human Resources for Health emphasises:

…”the fundamental importance of a competent, enabled and optimally organized and distributed health and social workforce, especially in rural and under-served areas, for the strengthening of health system performance and resilience.(84p1)

The scope of medical practice at Hokianga matches both the dual scopes of General Practice and RHM in NZ and the international definition of Rural Generalist Medicine.(5)

Findings concur with what is already established, that general medical practice in a rural context differs from that in metropolitan areas, (9, 11, 13, 20, 59, 84) and add to growing international consensus on the need for targeted rural postgraduate training and professional development pathways. Findings suggest that a rural workforce not trained for purpose can put clinical safety at risk. The recent Delhi Declaration calls for generalist health practitioners to be appropriately trained to meet the specific challenges faced in providing rural health services.(84)
The establishment of the RHM training programme aligns with recent developments in postgraduate rural medicine pathways internationally. (11, 104, 105) Moreover the establishment of the RHM scope has met the World Health Organisation’s recommendations for assisting the recruitment and retention of health professionals in rural remote areas globally, in particular the recommendations specified for targeted education, regulatory interventions and personal and professional support. (9)

Findings indicate that the RHM pathway can be part of the NZ solution for one of the main challenges for rural hospitals in ensuring that their medical staff have and maintain a broad and diverse skillset.

4.3.1.1 Flexibility

Rural hospital doctors in NZ occupy varying points on a spectrum described as a three dimensional matrix, with the axes of the matrix being: specialist/generalist, urban/rural and primary/secondary. (51) Rural doctors can thus be working solely in the RHM scope (for example in a large rural hospital); across RHM and General Practice scopes (for example in smaller and generally more remote health services) or in General Practice alone without access to an inpatient facility. Additionally, individual doctors might practice on different parts of this spectrum at different times in their career and spend time working in urban centres. The study findings concur with the literature in emphasising that rural training pathways be flexible, facilitating movement within the broad scope and remaining responsive to clinical and structural requirements of the spectrum of rural practice. (60, 104)

The RHM and General Practice training programmes within the RNZCGP are providing options for doctors wanting to train for rural practice and early evidence suggests trainees are taking advantage of this flexibility by combining General Practice and RHM training. (38)

Study findings support the notion that large urban hospital experience with high patient volumes be an essential component of training and preparation for working rurally. The RHM training programme and other international postgraduate rural training programmes already incorporate such rotations, recognising the value for future rural doctors of exposure to sufficient caseloads and teaching capacity in particular in the areas of emergency medicine, internal medicine, paediatrics, obstetrics and anaesthetics. (11, 38, 106)

Comprehensiveness has long been recognised as one of the key principles of General Practice (or Family Medicine) and primary care. (107, 108) The 2018 WONCA Delhi Declaration calls for rural doctors with a comprehensive range of skills. (84) A recent study from North
America identifies comprehensiveness as a core competency domain for rural doctors. Both ACRRM and the RNZCGP definitions of General Practice include comprehensive care. It is interesting to note that in a recent editorial of a NZ academic primary care journal “comprehensive” is not amongst the five proposed core values of modern family medicine, the author concluding that the term comprehensive be avoided in this (family medicine) context.

4.3.1.2 Generational differences

The study found differences between perspectives of doctors trained before the establishment of the RHM scope and those who had subsequently come through the RHM training programme. Older doctors viewed their work as “comprehensive primary care”, with the General Practice and RHM scopes both essential components but accordingly blurred. Younger doctors viewed their work as “primary care” and “secondary care”, two distinct but closely related scopes and training programmes. While older doctors self-identified as “rural GPs”, or “GPs with an extended scope”, younger doctors self-identified as “rural generalists” or “rural doctors”, but not as “rural GPs”. The use of the term “rural generalist” in this study reflects language increasingly used in the global and national rural health literature. In using the term “rural generalist” rather than “rural GP” to describe themselves, younger generation rural doctors are making a strong statement about their identity.

There are few previous studies exploring generational change in the rural medical workforce. The study’s finding of generational differences in perspectives concur with a recent Canadian study which looked at how rural practices were responding to the influence of the new generation of practitioners, concluding that change was underway and that:

*The willingness and ability to respond to shifting generational aspirations has a direct impact on the health of rural practices.*

This emphasises the importance of considering adaptations to the NZ rural practice environment and training programmes to keep pace with the attitudes and aspirations of new rural practitioners.

4.3.2 Nomenclature

It is well known that meanings of a word can change over time and that words can have different meanings in different contexts and from different perspectives. Even within the area of rural health, the issue of nomenclature has not been addressed:
There is a frequent assumption of a shared language in rural and remote health policy, practice, research and education. (114p2)

Study findings suggest that aligning terminology to fit changing policy can be critical in sustaining rural health services. Findings also caution against the poorly considered application of urban-centric definitions (e.g. for primary care and secondary care) to the rural context as this may risk accentuating divisions that do not benefit rural communities.

Ensuring clarity in nomenclature, from the individual practitioner to the organisational level, may help to not only avoid misunderstandings but also assist in teasing out key differences between rural and urban perspectives with implications for training programmes and regulatory policy.

4.3.3 Understanding the rural health context

Rural healthcare is more than simply the practice of healthcare in another location. (115p69)

The rural context is all important and often misunderstood. (116, 117) The study findings facilitate the understanding of rural health in its own context rather than looking at it through an urban lens, which is the predominantly presented view. This perspective may offer (or go part way to offering) solutions to address the perceived challenges of rural health care.

Bourke et al provide a conceptual framework as a guide to understanding rural health which, while Australian focused, has global application. (116) The importance of spatial isolation distinguishes this framework for specifically understanding rural health from health in general. As demonstrated in this study, spatial isolation impacts on health needs and service responses influencing the breadth of care that a rural health service provides. Access in the spatial sense is widely recognised as the number one rural health issue worldwide. (6) The five other key concepts of the framework are: the rural locale, local health responses, broader health systems, social structures and power, and all feature to different degrees in this study’s findings. The importance of local context, including individual perceptions and attitudes in the local community, as a key environmental enabler of sustainable rural health services as found in this study, is well established. (118, 119)

The study concurs with previous findings that for many rural communities:

the hospital is not just a provider of acute medical and surgical services, but part of the economic and social fabric of the community. (4p11)
The study demonstrates that an integrated model of care, one of comprehensive primary care, can incorporate quality hospital-based care and that this in turn can enhance comprehensive and continuous care for a rural community. This finding concurs with the literature that rural community hospitals, situated at the interface between primary, secondary, community and long-term care services care can contribute to enhanced integration of service delivery and benefit the health of rural remote populations.(120, 121)

The study findings introduce the concept of hospital as home, the hospital embedded in the community it serves and its cultural values. For Hokianga Health this relates back to the principle of Tino Rangatiratanga. Rangatiratanga in this context means to be responsible for the life, health care and general well-being of your community (122), and is expressly incorporated within (and extends beyond) Hokianga Health’s foundation. This concept highlights the importance of culturally appropriate (in addition to geographically appropriate) health services for rural communities.

While the comprehensive provision of quality health care services and the reduction of health inequalities are major priorities and objectives of the member countries of the Organisation for Economic Co-operation and Development (OECD), serious challenges are recognised in achieving these objectives in rural areas.(118, 123) The literature finds that:

> The need for sustainable health services is particularly acute in small rural and remote communities where the challenges associated with delivering a comprehensive range of primary care services are greatest.(124p2)

The study findings concur, suggesting that for a remote integrated health service, centrally based systems, processes and funding models on which the service is dependent are fragmented. Study findings indicate that the challenges resulting from the new RHM scope at the individual practitioner level mirror those at the wider rural health service level. Rural practitioners and services try to fit regulatory systems and processes that in general are urban-centric and that have not been set up with a rural scope of practice and model of care in mind. Findings suggest that this peripheral-central or rural-urban mismatch not only creates frustrations but also vulnerability for individual practitioners and has the potential to threaten the sustainability of small rural health services such as Hokianga Health.

It seems likely that there are persistent barriers to integrated care in rural NZ and what is perceived to work best from the perspective of the rural community and health service does not always reconcile well with what is perceived to work for rural from the perspective of centrally based organisations. Fostering understanding of rural reality at the large institutional
regulatory bodies’ level would be a positive step towards reversing this and working towards meeting the objectives of the OECD.\(^{(123)}\)

The positivity of rural medicine and rural health in general highlighted in this study challenges previous and pervasive discourses of rural health, which have tended to portray rural health as problem based.\(^{(117, 125, 126)}\) The RHM and dual RHM-General Practice trainees are there in rural practice by choice not chance, bringing a genuine excitement for rural medicine that spills over to the established clinicians and other staff at Hokianga who can see a newer generation of doctors with the competence and confidence to work in their context. The study findings thus offer an alternative to a dominant negative discourse of rural health.\(^{(127)}\)

The importance of connectivity as an enabler of sustainability for a small rural health service is emphasised in this study. Study findings concur with previous research that academia, both teaching and research, can strengthen rural practice.\(^{(128-131)}\) In developing strong faculties of rural health in partnership with rural communities there is potential for academic institutions to provide models of integrated (under-and post graduate and across health professions) teaching and research which could not only contribute to improving the health of rural people but also further positively influence the discourse of rural health.

Sustainability in the rural health literature refers to:

\[
\textit{the ability of a health service to provide ongoing access to appropriate quality care in a cost-efficient and health-effective manner.}^{(132p33)}
\]

and

\[
\textit{imply a capacity to persist in, and adapt to, a changing environment.}^{(124p2)}
\]

This study contributes to what is already known regarding the sustainability of small rural health services, highlighting four key enablers: quality of care, external connectedness, optimism and strong community engagement. While RHM has contributed to the first three, at Hokianga the fourth is the foundation stone on which all the others are built. The study findings evoke a picture of resilience: a rural health service adapting over decades to the changing policies, systems and nomenclature of the outside world, aligning its approach and language, while keeping its focus steadfastly on the community it serves. Hokianga Health, by taking steps to both pursue the opportunities but also address risks presented by the new RHM scope, has achieved better quality of care, stronger connections and grounds for optimism.
The study provides an example of a policy (the defining of a vocational scope of General Practice 1995) determining the healthcare provided to (and potentially affecting the health of) rural people, which was developed by central urban-based national organisations and which eventually led to some negative consequences for Hokianga Health and its practitioners.

Study findings suggest that regulatory changes made centrally at national body level, such as the introduction of a new scope of practice, take time to filter down to the level of health services.

It is still too early to determine the impact the RHM initiative will have on the workforce in the long term. It remains to be seen whether new RHM Fellows, or dual fellows of General Practice and RHM, fill vacancies in rural practices such as Hokianga Health. This will ultimately be the real test of the RHM’s scope’s impact.

4.4 Strengths and limitations of the study

This case study used multiple sources of data with converging lines of inquiry. Using two data sets (document analysis and interviews) generated an in-depth and multi-faceted exploration of the issues, with corroboration of findings across multiple sources. This approach minimised bias and established credibility and could not have been achieved using one data set alone.

While document analysis provided historical stakeholder perspectives with convergence of findings from a range of documents, the interviews gained personal and in-depth perspectives.

The operations of the study, such as the data collection, were clearly documented and described such that data collection could be repeated with comparable results.

With the perspective of the research that of healthcare providers at Hokianga Health, the study used purposive sampling for the interviews. All interviewees were Hokianga Health staff and, with the research focus on medical scopes of practice, the majority were medical practitioners. The inclusion of other key senior staff provided wider perspectives. No one declined to participate. Medical practitioners interviewed included those now retired as well as current permanent staff and trainees, thus providing a range of perspectives covering a time span of several decades.

This study provides an example of insider research in a small rural community setting, as previously described. Appropriate measures taken for ensuring rigor in this context include explicitly acknowledging the insider status of the lead researcher in participant
information and consent forms; use of a reflective diary; the research supervisors frequently checking coding and manuscripts and regular discussion with the research supervisors.

The researcher conducted all the interviews and was known to all interviewees. All interviewees knew that the researcher was directly involved and connected with Hokianga Health and involved in the development of the RHM scope. Advantages in using an independent “outsider” interviewer have been discussed previously. (134) An independent interviewer is not aware of layers of value perceived by the interviewee or the involved researcher and therefore is able to ask questions in a value-neutral manner. With an independent interviewer, interviewees may be less likely to tailor their answers to fit what they think the researcher wants to hear. Thus, it is possible that fewer negative views of the RHM scope’s impact at Hokianga Health were gained in this study than might have otherwise been the case if the researcher interviewer had been known to disapprove of the RHM scope.

However there are also negative impacts from using an independent interviewer. (134) For example an interviewer not versed in the reality and nomenclature of the context under study (i.e., Hokianga Health, rural context, scopes of practice) might not understand subtleties of an answer or see where further clarification of an answer was necessary.

It is possible that despite efforts to the contrary the researcher was not receptive to negative opinions of the RHM scope at Hokianga. It is also probable that, as has been found elsewhere in insider research, (134) the researcher found enlightening concepts that would have passed by a researcher not intimately engaged with the subject, and that interviewees were comfortable expressing opinions because they knew that their statements would be interpreted by someone who they knew understood the context and the subtext.

The underlying hypothesis explored in this thesis (that the RHM scope has done what it was intended to do) defines the domain to which the study findings can be generalised: NZ rural hospitals. It is likely that findings from the study have wider relevance to all rural health services both in NZ and in international settings. However, the study focused on a single rural health service with a particular model of care, geography and population. This needs to be taken into account when translating findings.
Chapter 5
Summary and recommendations

5.1 Summary
This study provides the first in depth evaluation of the Rural Hospital Medicine (RHM) vocational scope of practice, through the lens of one rural health service. The study found that RHM with its associated targeted rural training and professional development programs has enabled the strengthening of both clinical practice and wider quality systems and standards at Hokianga hospital, thus meeting the intentions of the new scope at this site. Challenges arising from the new RHM scope were also identified at both the individual practitioner and the health service level. It is acknowledged that, ten years from the introduction of the RHM scope, it is still too early for the full impact of the RHM scope to be assessed. Though focused on one rural health service with a unique, long-established model of care, findings from the study are applicable to other rural health services in NZ and internationally.

5.2 Implications for policy and practice
To ensure that the implications of policies take the needs of rural communities and rural health services into account, thus mitigating against possible negative effects, national and global bodies are increasingly calling for rural proofing of health policy.(49, 84, 135) The findings from this study support the notion that NZ implements a process of rural health impact assessment. As already identified, requirements for this would include that “Rural” has a seat at the policy making table of national bodies (including the Ministry of Health, RNZCGP, MCNZ, University faculties), and that comprehensive rural health relevant national research data is available and fit for purpose.(18, 84, 135-137)

5.3 Recommendations for health professional training institutions
The following are recommendations for organisations involved in training health professionals for the rural context and are based on the findings emerging from the research.

It is recommended that:

- The RNZCGP ensures that its associated systems and processes continue to reinforce inclusiveness and flexibility across the scopes of General Practice and RHM.

- The RNZCGP continues to develop targeted rural training pathways across the spectrum of rural medical generalism (i.e., across primary-secondary care) that
facilitate movement within the broad scope and includes GPs practicing rurally without access to a rural in-patient facility.

- Professional training bodies across the health disciplines (e.g. nursing, physiotherapy, dental, pharmacy) be supported to develop rural-specific training and continuing education pathways.
- Universities foster the development of the academic discipline of Rural Health.
- Universities continue to foster connections with rural communities and rural health services, and build on this in developing rural-centric academic infrastructure.

5.4 Recommendations for future research

While the perspective of this study was that of healthcare providers, further research should consider community perspectives as stakeholders of interest in further exploring the impact of the RHM scope at Hokianga Health. A Kaupapa Māori collaborative and community-led approach would be appropriate. (138)

Communities expect their doctors to be competent and generally place their trust in the doctors and the systems that regulate their practice. It is known that there is widespread variation in quality of care in all areas of medicine including General Practice and that such variation is hidden from the general public. (26) It is likely that many members of the public (and many health professionals) are unaware of general versus vocational scopes of medical practice or of the two separate scopes of General Practice and RHM. A study investigating rural patients’ perspectives regarding competence and qualifications of health professionals is an important area for future research.

Comparative studies should be undertaken in other parts of rural New Zealand where health services have different models of care, as the impacts of the RHM scope are likely to differ according to factors such as health service structures, geographical location and culture.

A study of the outcomes of the first ten years of the RHM training programme would further our understanding of the influence of the RHM programme on NZ-wide rural practice and the workforce.

A question not addressed directly, but thrown up by this study and in need of further investigation, is whether the current GP training programme is providing newly trained doctors going into rural general practice alone (i.e., with no rural hospital component) with
the right training and supports to work effectively, competently and confidently in the rural context.

Further research could explore the aspirations of young NZ health professionals (medical and non-medical at both undergraduate and postgraduate training levels) intending to work rurally. This would be helpful in understanding factors influencing rural recruitment and retention.

The study calls for further study, discussion and debate around the term “comprehensiveness” including how we define comprehensiveness in the context of rural generalist medicine and whether this is the/a difference between rural generalist medicine and General Practice in a metropolitan context.
References


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94. Richards H, Emslie C. The ‘doctor’or the ‘girl from the University’? Considering the influence of professional roles on qualitative interviewing. Fam Pract. 2000;17(1):71-5.


Appendix I - Ethics approval

Professor S Dovey
Department of General Practice & Rural Health
Dunedin School of Medicine
University of Otago Medical School

8 July 2016

Dear Professor Dovey,

I am again writing to you concerning your proposal entitled “The impact on the Hokianga Health service of the Rural Hospital Medicine vocational scope”, Ethics Committee reference number 16/085.

Thank you for your email of 7th July 2016, with attached revised documentation, addressing the issues raised by the Committee.

On the basis of this response, I am pleased to confirm that the proposal now has full ethical approval to proceed.

Approval is for up to three years from the date of this letter. If this project has not been completed within three years from the date of this letter, re-approval must be requested. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing.

The Human Ethics Committee asks for a Final Report to be provided upon completion of the study. The Final Report template can be found on the Human Ethics Web Page

http://www.otago.ac.nz/council/committees/committees/HumanEthicsCommittees.html

Yours sincerely,

Mr Gary Witte
Manager, Academic Committees
Tel: 479 8256
Email: gary.witte@otago.ac.nz

cc. Professor T N Stokes  Head of Department  Department of General Practice & Rural Health
THE IMPACT ON THE HOKIANGA HEALTH SERVICE OF THE RURAL HOSPITAL MEDICINE VOCATIONAL SCOPE

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate, thanks. If you decide not to take part there will be no disadvantage to you of any kind and I thank you for considering my request.

What is the Aim of the Project?

In 2008 Rural Hospital Medicine (RHM) was approved by the Medical Council of New Zealand (MCNZ) as a new vocational scope of practice. The intention was to provide recognised standards of training for doctors working in rural hospitals. The RHM scope of practice is filling gaps in the training and maintenance of standards that vocational training for General Practice left among doctors working in Hokianga, before 2008, and at the same time it is presenting some challenges. We aim to find out whether and how the RHM scope has affected the provision of medical care in Hokianga.
The perspective of the proposed research is that of healthcare providers, acknowledging that patients and the community are also stakeholders of interest. The results will have implications for Hokianga Health and may be transferable to other rural health services in wider Northland, and New Zealand.

This project is being undertaken as my research thesis for a Masters in Health Sciences.

**What Type of Participants are being sought?**

The project seeks participants who are or have been employed at Hauora Hokianga from 2005-2015. This includes medical practitioners, other health professionals and managerial staff.

**What will Participants be Asked to Do?**

Should you agree to take part in this project, you will be asked to participate in an individual interview in which the focus will be on your view of the impact of the RHM scope of practice at Hokianga.

Individual interviews will be conducted face-to-face, at Rawene Hospital and should be about 45 minutes in length. You will be asked to sign a Consent Form if you are interviewed. The interviews will be recorded, transcribed and analysed.

Because there is a potential conflict of interest between my role as investigator in this study and other roles, (as a doctor employed by HHET and in leading the development of the rural generalist specialist scope of medical practice), there will be journaling around all interviews and oversight by my supervisors.

No harm or discomfort to you is envisaged.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

**What Data or Information will be Collected and What Use will be Made of it?**
The **individual interview** will be recorded digitally, transcribed verbatim, and returned to you for checking and comment. It will then be analysed, and themes identified. The interview recording will be accessible only to the researcher and a transcriber. The recording will be stored on a password-protected computer at the University. Your name will be removed from the data set.

During the interview an open-questioning technique will be used. The general line of questioning will explore your views of the impact at Hokianga Health of the RHM scope such as recruitment and retention, quality of care at Rawene Hospital, costs involved, challenges, ‘fit’ of medical scopes of practice to the work at HHET.

The precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the University of Otago Human Ethics Committee is aware of the general areas to be explored in the interview, the Committee has not been able to review the precise questions to be used.

In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

The data collected will be securely stored in such a way that only the person mentioned below will be able to gain access to it. At the end of the project, any personal information will be destroyed immediately, except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed. Given the small number of eligible participants there is a potential risk of you being identified, however every attempt will be made to preserve your anonymity.

The results of the research will be made available to participants when the project is completed.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) and every attempt will be made to preserve your anonymity.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.
Can Participants Change their Mind and Withdraw from the Project?

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

What if Participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact me using the following information:-

*Katharina Blattner* and *Name of Supervisor*

Department of …

University Telephone Number: - …

Email Address …

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph +64 3 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Appendix III – Consent form for participants

[Reference Number 16/085]

[14 June 2016]

THE IMPACT ON THE HOKIANGA HEALTH SERVICE OF THE RURAL HOSPITAL MEDICINE VOCATIONAL SCOPE

CONSENT FORM FOR PARTICIPANTS

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

I know that:-

1. My participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. Personal identifying information, (written notes and audio recordings), will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for at least five years;

4. This project involves an open-questioning technique. The general line of questioning will explore changes in the ways health service in the HHET is delivered that may have arisen from introducing the new Rural Hospital Medicine scope: The precise questions to be asked have not been determined in advance, but will depend on the way the interview develops. If the line of questioning develops in a way that makes me feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind;

5. I understand that this research is part of a master’s degree research project that Dr Kati Blattner is undertaking;

6. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity.

I agree to take part in this project.

............................................................................
(Signature of participant) ............................... ...............................
................................................................. ...............................
(Signature of participant) (Date) ...............................

............................................................................
(Printed Name)

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph +643 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Title: The impact on the Hokianga health service of the Rural Hospital Medicine vocational scope.

Key themes:

Health systems; models of care; rural health care; medical scopes of practice;

Rural communities; Access to services for rural communities; health workforce.

Background

Rural Hospital Medicine
A medical scope of practice is the range of responsibility that determines the boundaries within which a physician practices. It is determined by the patients the physician cares for, the procedures performed, the treatments provided, and the practice environment.¹

In March 2008 Rural Hospital Medicine (RHM) was approved by the Medical Council of New Zealand (MCNZ) as a new vocational scope.²³ This arose out of the need to address vocational issues for doctors working in rural hospitals and the wider issue of quality of clinical safety in these hospitals.²⁻⁵ A tendency to think of rural health as being limited to primary care in New Zealand had put rural hospital care into an anomalous situation where the particular needs of this sub-sector were unrecognised or overlooked.²⁻⁴

Rural Hospital Medicine is generalist, secondary-level care practised at a distance from specialists and complex diagnostics. The scope is determined by its social context, the rural environment and the demands of this environment which include professional isolation, geographic isolation, limited resources and special cultural and sociological factors.¹³

Vocational training in rural hospital medicine is undertaken through the Division of Rural Hospital Medicine of New Zealand (DRHMNZ), which is a sub-faculty of the Royal New Zealand College of General Practitioners (RNZCGP).³

The much earlier introduction of a defined scope of practice and vocational registration and training programme for General Practice (GP) in 1995, with focus on community based
primary care, meant that a decade later much of the medicine that rural doctors practised fell outside the GP scope of practice.\textsuperscript{6}

The intention of the new RHM scope was to provide recognised standards of training, and ongoing relevant professional development for doctors working in rural hospitals, thus securing a future for New Zealand (NZ) rural hospitals as providers of high quality care for their communities. The new scope was intended to encourage development of systems such as clinical governance and credentialing, (routine in large hospitals), to become established in rural hospitals.\textsuperscript{2-5}

\textbf{Hokianga}

Hokianga is an area in the far north of NZ with a low density population of approximately 6500 people, 70\% identifying as Māori. An integrated health service has been running in Hokianga since 1941 when the area was designated a Special Medical Area (SMA).\textsuperscript{7} Although historically and culturally rich it is today one of the most socio-economically deprived populations in New Zealand.\textsuperscript{7,8}

The Hokianga health service is community owned and, since 1992, administered by Hokianga Health Enterprise Trust (HHET).\textsuperscript{7,9,10,11} The hospital at Rawene with acute bed capacity is an integral part of the service. HHET is the sole provider of health services, including emergency services for the region. The nearest base hospital, Whangarei, is two hours away by road. The nearest tertiary centre (and closest cardiac intervention centre) is in Auckland, four hours away by road. There are about 750 acute admissions to Rawene Hospital each year of which about 20\% are transferred.\textsuperscript{9,10,12}

Medical staff, currently seven full-time equivalents (FTE), are employed by HHET and provide all local medical services across the primary secondary interface. Their work includes acute, in-patient and after-hours care at the hospital as well as standard general practice at Rawene Health Centre and peripheral clinics.

Currently four of the permanent medical staff at HHET have dual vocational registration in General Practice and Rural Hospital Medicine, one has - and two are in the process of - gaining vocational registration in General Practice. One is an International Medical Graduate (IMG) locum, with MCNZ general registration.

The dominant model of care in rural New Zealand is one of separated (by medical scope, governance and funding) services for primary care (which is community based and includes GP), and secondary care, (which is hospital based). The majority of New Zealand rural
hospitals are operated by District Health Boards (DHBs). Thus both the model of care and governance at HHET differ from most rural health services both regionally (Northland) and nationally.

Like many rural health services Hokianga has been the subject of review, and threatened downgrade or closure, due to low volumes of services and the postulated consequences of poor quality healthcare and healthcare outcomes. As recently as 2014 the ‘Hokianga Model of Care review’ was undertaken for the Northland District Health Board (NDHB) by Health Partners Consulting Group.

Theory development
The Rural Hospital Medicine scope of practice is filling gaps in the training and maintenance of standards that vocational training for general practice left among doctors working in Hokianga, before 2008, and at the same time it is presenting some challenges. The theory to be explored in this thesis is that the RHM scope has done what it was intended to do, and if it has not this research will identify dimensions in which it has failed. Furthermore there may well be unintended consequences to the HHET service and its community from having some of its doctors trained in this new scope. We wish to establish if this has happened and what such unintended consequences might be.

Aim
To find out whether and how the Rural Hospital Medicine scope of practice has affected the provision of medical care in Hokianga.

The research objectives are:

1. To review documents of the HHET service and the Division of Rural Hospital Medicine (DRHMMNZ) and other relevant documents to explore the impact if any, of the scope of RHM on Hokianga health services.
2. To explore the views of HHET medical staff (current and past permanent staff, locums, registrars) on the impact on Hokianga health services of the RHM scope.
3. To explore the views of key non-medical staff at HHET, (Management, Nurse Leaders, radiographer, Te Taumata), on the impact on Hokianga health services of the RHM scope.

Design
A multi-method case study comprising: semi structured interviews and review of relevant documents.

**Document review:** The purpose of this review is to identify changes in systems and healthcare delivery services at Rawene Hospital before and after the introduction of the RHM professional scope of practice. A review of key documents for HHET, particularly documents that track development of the HHET service and the DRHMMNZ spanning the past decade (2005 - 2015) will be undertaken. The document review process will provide background information and may discover insights into the context (HHET) into which the new scope of RHM has come. The data will also help formulate questions for the interviews. \(^{13, 14}\)

**Semi-structured interviews:** Seven face-to-face interviews with doctors who have worked at HHET during 2005-2015. The interview schedule will explore participants’ accounts of how the RHM scope of practice has impacted on them and their work in Hokianga, and on the HHET service as a whole.

Further three interviews with key non-medical staff at HHET: e.g.: CEO, Nurse Manager, and Te Taumata. They will be asked about how the RHM scope of practice has impacted on the HHET service.

While it is important that there is some consistency in the structure of these interviews it is also important that discussion can range freely and exploration of the issues that the participating person feels are important is allowed to occur.

Interviews will be conducted by the candidate and be digitally recorded and then transcribed. The candidate will use an immersion/crystallization process to identify themes and subthemes, overseen by the supervisors.\(^{15}\)

**Bracketing researcher preconceptions:**

The candidate /lead investigator is an ‘insider’: part of the reality the thesis is aiming to understand, (a clinician at HHET since 2004, vocationally registered in GP and RHM, a member of the DRHMMNZ Board of Studies and one of the initiators of the RHM training programme). While this allows awareness of key issues and buy- in at Hokianga, the candidate will be aware of and acknowledge her own subjectivity.

The candidate will keep a log with details of how she may have influenced each interview – this ‘reflexive journal’ then will contribute to final analyses. Data collected will be reviewed by the supervisors at regular intervals.
The analysis will test validity by using data triangulation (document reviews and interviews), establish reliability by the analytic strategy and address rival explanations in interpretation of the study’s results.\textsuperscript{16}

**Research Impact**

The Rural Hospital Medical scope is a new facet of the New Zealand health system that has to date not been evaluated. It is unlikely that its introduction has been without effect, but it is not yet known whether consequent changes are or have been as intended. This study will address the impact of the Rural Hospital Medicine vocational scope in one rural region where there was a mismatch in the scope of medicine practiced and the available training and maintenance of standards before the Rural Hospital Medicine scope began. In the interests of completing a project suitable for an MGP thesis, the perspective of the proposed research is that of healthcare providers, acknowledging that patients and the community are also stakeholders of interest.

The results may have implications for health services in wider Northland, New Zealand and internationally.

**Timeline**

<table>
<thead>
<tr>
<th>Task</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consult, engage HHET/Ethics apprvl</td>
<td>Sep-Oct-Dec</td>
<td>Jan-Mar</td>
<td>Apr-Jun</td>
</tr>
<tr>
<td>ITS training Literature review</td>
<td></td>
<td>Jul-Sep</td>
<td>Oct-Dec</td>
</tr>
<tr>
<td>Prepare guides for doc rv and interview.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face-to face mtg with supervisors</td>
<td></td>
<td></td>
<td>Jan-Mar</td>
</tr>
<tr>
<td>Data collection: Document rv</td>
<td></td>
<td></td>
<td>Apr-Jun</td>
</tr>
<tr>
<td>Data collection: interviews</td>
<td></td>
<td></td>
<td>Jul-Sep</td>
</tr>
<tr>
<td>Data analysis</td>
<td></td>
<td></td>
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<tr>
<td>Report writing</td>
<td></td>
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<td></td>
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<tr>
<td>Finalise report</td>
<td></td>
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## Appendix V - List of documents included in the document analysis

<table>
<thead>
<tr>
<th>No.</th>
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<th>Name of document</th>
<th>Author</th>
<th>Context</th>
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<tr>
<td>1</td>
<td>2002</td>
<td>HHET Annual Report</td>
<td>HHET</td>
<td>Overview of activities of HHET over past year, highlights achievements and strategic direction, financial performance.</td>
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<td>2005</td>
<td>HHET Annual Report</td>
<td>HHET</td>
<td>Overview of activities of HHET over past year, highlights achievements and strategic direction, financial performance.</td>
</tr>
<tr>
<td>3</td>
<td>2007</td>
<td>Branch Advisory Body (BAB) Rural Hospital Medicine application.</td>
<td>RHM Working Party</td>
<td>BAB Q3: defined body of knowledge &amp; practice specifically identifiable with vocational scope of RHM.</td>
</tr>
<tr>
<td>4</td>
<td>2007</td>
<td>HHET Annual Report</td>
<td>HHET</td>
<td>Overview of activities of HHET over past year, highlights achievements and strategic direction, financial performance.</td>
</tr>
<tr>
<td>5</td>
<td>2007</td>
<td>Hewlett Packard. Hokianga Hospital Services Review</td>
<td>Hewlett Packard, NDHB</td>
<td>Review of the integrated service at HHET – jointly commissioned by Northland DHB and HHET</td>
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<td>6</td>
<td>2008</td>
<td>GPEP Audit, NZ Family Physician</td>
<td>Montalvo, V</td>
<td>Published article in New Zealand Family Physician</td>
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<td>7</td>
<td>2009</td>
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<td>Application form for DRHMSN training site accreditation</td>
<td>DRHMSNZ</td>
<td>Application form for DRHMSNZ training site accreditation</td>
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<td>2010</td>
<td>Response from DRHMSNZ to accreditation application from HHET</td>
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<td>Response from DRHMSNZ to accreditation application from Rawene Hospital</td>
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<td>Health Policy Journal. Changes in clinical practice and patient disposition following the introduction of Point-of-Care Testing in a rural hospital.</td>
<td>Blattner, Nixon, Dovey, Jaye, Wigglesworth.</td>
<td>Published journal article (Health Policy) reporting on impact of Point of Care testing at Rawene hospital study.</td>
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<td>2010</td>
<td>Journal of Primary health Care: Introducing Point of Care into rural hospital setting.</td>
<td>Blattner, Nixon, Jaye, Dovey.</td>
<td>Published article (Journal of Primary Health Care).</td>
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<td>Name of document</td>
<td>Author</td>
<td>Context</td>
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<td>NDHB</td>
<td>Urgent and Emergency Care Workshop: Role of District Hospitals</td>
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<td>2011</td>
<td>Rural Remote Health Journal. The Rural Hospital doctors workforce in NZ.</td>
<td>Lawrenson, Nixon, Steed.</td>
<td>Published article (Rural Remote Health Journal)</td>
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<td>2012</td>
<td>Integrate and Innovate: tips and tools for integrated care.</td>
<td>RNZCGP</td>
<td>A collection of articles from around NZ re integrated care, published by RNZCGP</td>
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<td>Northland wide strategic plan.</td>
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<td>Review of the Rural Postgraduate Program University of Otago</td>
<td>University of Otago</td>
<td>External review of the PG rural Uni Otago programme.</td>
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<td>2014</td>
<td>Significant Events Meeting Minutes, August</td>
<td>HHET</td>
<td>Minutes of significant events Hokianga Health monthly meeting.</td>
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<td>2014</td>
<td>HHET Model of Care Review.</td>
<td>Health Partners Ltd. for NDHB</td>
<td>Review of the integrated service at HH – jointly commissioned by Northland DHB and HHET</td>
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<td>20</td>
<td>2015</td>
<td>HHET Annual Report</td>
<td>HHET</td>
<td>Overview of activities of HHET over past year, highlights achievements and strategic direction, financial performance.</td>
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<td>21</td>
<td>2015</td>
<td>The NZ Rural Hospital Doctors Workforce Survey.</td>
<td>Lawrenson, Reid, Nixon.</td>
<td>Final draft of submission to NZMJ article.</td>
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<td>2015</td>
<td>Meeting Minutes, HHET and NDHB re Credentialing</td>
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<td>Meeting Hokianga doctors &amp; CMO NDHB set up credentialing process for Rawene hospital</td>
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<td>Outline of credentialing for Hokianga Hospital medical staff</td>
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<td>Significant Events Meeting Minutes, December</td>
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<td>Minutes of significant events monthly meeting.</td>
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<td>2016</td>
<td>Accreditation approval for Hokianga Hospital</td>
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<td>2016</td>
<td>HHET Annual Report</td>
<td>HHET</td>
<td>Overview of activities of HHET over past year, highlights achievements and strategic direction, financial performance.</td>
</tr>
</tbody>
</table>
Appendix VI - Interview schedule A (medical participants)

Demographic and background information:

I’m first going to ask some background questions about you as a doctor and how/when you came to work at Hokianga Health...

Age or year of graduation?

Where did you do your medical training?

What is your registration status with the MCNZ i.e.: general vs vocational registration? GP/RHM/trainee?

For those not currently working at HH:

Where are you currently working?

When did you work at HH? How long for? In what capacity?

For those currently working at HH:

How long have you been at HH?

Where did you work before you started at Hokianga?

Following on from the information sheet I am exploring what has been the impact of the scope of rural hospital medicine at Hokianga Health.

Clarification of topic: are you/were you aware of the separate scopes of GP and RHM? How?

Can you describe the scope of your work at Hokianga Health?

What kind of cases would you see on an average day?

Would this differ at weekends or on evening call?

How do you define your work/what you do to others? (e.g. what do you specialise in?)

Does your PG training and your prior work experience fit the job here?

How does the job differ from previous GP or RHM work you have done?

Are there parts of your work that you feel more or less confident in?

What do you see as the skills needed by a doctor working in Hokianga?

What do you consider is the best training for doctors working at Hokianga?

How do you find keeping up your skills and knowledge?

How is the support and access to resource to do upskilling/attend courses etc.?
How do you find the general understanding of and support for doctors and their work in the hospital and after-hours?

From management/other staff/ from the community

Are there expectations around what should/can/cannot be managed here?

How do you find the resources for hospital work (eg diagnostics, access to guidelines, other resources) at HH?

How do you see the role or place of the hospital as part of the integrated service for Hokianga?

How does the presence of a hospital (in-patient beds, ER) add value? Give examples of cases seen.

If the hospital was no longer here, what effect could that have?

How do you see the role, if any, of the RHM scope of practice in improving disparities (quality health care and/or access to health care) for the people of Hokianga?

How do you think Hokianga hospital is seen by those outside/externally? (e.g. by the NDHB, training institutions, other rural hospitals).

What do you see as the benefits of the RHM scope of medicine for Hokianga?

What do you see as the challenges of the RHM scope of medicine for Hokianga?

Do you have any other comments at all about the subject that have not been covered?
Appendix VII – Interview schedule B (non-medical participants)

**Demographic information:**
How long have you been at HH?
In what capacity /your role?
Where did you work before you started at Hokianga?

Following on from the information sheet I am exploring what has been the impact of the scope of rural hospital medicine at Hokianga Health –

Clarification of topic: are you/were you aware of the separate scopes of GP and RHM? How?

Can you describe the scope of work at Hokianga Health?

How do you find the general understanding of and support for doctors and nurses in their work in the hospital and after-hours?
From management/other staff/from the community.
Are there expectations around what should/should not/ can/cannot be managed here?
How do you find the resources for hospital work (eg diagnostics, access to guidelines other resources) at HH?

**Recruitment and Retention**
What do you see as the skills needed by a doctor working in Hokianga?
What do you consider is the best training for doctors working at Hokianga?

**Clinical Safety**
What are the main challenges for Hokianga hospital?
Any comment around quality of care, maintaining standards?

**How do you see the role or place of the hospital as part of the integrated service for Hokianga?**
How does the presence of a hospital (in-patient beds, ER) add value?
If the hospital was no longer here, what effect could that have?
How do you see the role, if any, of the RHM scope of practice in improving disparities (quality health care and/or access to health care) for the people of Hokianga?

How do you think Hokianga hospital is seen by those outside/externally? (e.g. by the NDHB, training institutions, other rural hospitals)

What do you see as the challenges of the RHM scope of medicine for Hokianga?

What do you see as the benefits of the RHM scope of medicine for Hokianga?

Do you have any other comments at all about the subject that we have not covered?
Appendix VIII – COREQ Checklist

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Domain 1: Research team</strong></td>
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<tr>
<td>and reflexivity</td>
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<tr>
<td>Personal characteristics</td>
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<tr>
<td>Interviewer/facilitator</td>
<td>1</td>
<td>Which author/s conducted the interview or focus group?</td>
<td>Y p 25</td>
</tr>
<tr>
<td>Credentials</td>
<td>2</td>
<td>What were the researcher’s credentials? E.g., PhD, MD</td>
<td>Y p 21</td>
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<tr>
<td>Occupation</td>
<td>3</td>
<td>What was their occupation at the time of the study?</td>
<td>Y p 21</td>
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<tr>
<td>Gender</td>
<td>4</td>
<td>Was the researcher male or female?</td>
<td>Y p 21</td>
</tr>
<tr>
<td>Experience and training</td>
<td>5</td>
<td>What experience or training did the researcher have?</td>
<td>Y p 21</td>
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<tr>
<td>Relationship with</td>
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<tr>
<td>participants</td>
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<tr>
<td>Relationship established</td>
<td>6</td>
<td>Was a relationship established prior to study commencement?</td>
<td>Y p 19, 20</td>
</tr>
<tr>
<td>Participant knowledge of</td>
<td>7</td>
<td>What did the participants know about the researcher? E.g., personal goals, reasons for doing</td>
<td>Y p 19, 20</td>
</tr>
<tr>
<td>the interviewer</td>
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<td>the research</td>
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<tr>
<td>Interviewer characteristics</td>
<td>8</td>
<td>What characteristics were reported about the interviewer/facilitator? E.g., Bias, assumptions,</td>
<td>Y p 19, 20</td>
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<td></td>
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<td>reasons and interests in the research topic</td>
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<td><strong>Domain 2: Study design</strong></td>
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<td>Theoretical framework</td>
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<tr>
<td>Methodological orientation</td>
<td>9</td>
<td>What methodological orientation was stated to underpin the study? E.g., grounded theory,</td>
<td>Y p 16 - 18</td>
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<tr>
<td>and Theory</td>
<td></td>
<td>discourse analysis, ethnography, phenomenology, content analysis</td>
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<tr>
<td>Participant selection</td>
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<tr>
<td>Sampling</td>
<td>10</td>
<td>How were participants selected? E.g., purposive, convenience, consecutive, snowball</td>
<td>Y p 24</td>
</tr>
<tr>
<td>Method of approach</td>
<td>11</td>
<td>How were participants approached? E.g., face-to-face, telephone, mail, email</td>
<td>Y p 24</td>
</tr>
<tr>
<td>Sample size</td>
<td>12</td>
<td>How many participants were in the study?</td>
<td>Y p 24</td>
</tr>
<tr>
<td>Non-participation</td>
<td>13</td>
<td>How many people refused to participate or dropped out? Reasons?</td>
<td>Y p 24</td>
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<tr>
<td>Setting</td>
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<tr>
<td>Setting of data collection</td>
<td>14</td>
<td>Where was the data collected? E.g., home, clinic, workplace</td>
<td>Y p 25</td>
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<tr>
<td>Presence of non-</td>
<td>15</td>
<td>Was anyone else present besides the participants and researchers?</td>
<td>Y p 25</td>
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<tr>
<td>participants</td>
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<tr>
<td>Description of sample</td>
<td>16</td>
<td>What are the important characteristics of the sample? E.g., demographic data, date</td>
<td>Y p 25 - 36</td>
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<tr>
<td>Data collection</td>
<td></td>
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<tr>
<td>Interview guide</td>
<td>17</td>
<td>Were questions, prompts, guides provided by the authors? Was it pilot tested?</td>
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<tr>
<td>Repeat interviews</td>
<td>18</td>
<td>Were repeat inter views carried out? If yes, how many?</td>
<td>N p 25</td>
</tr>
<tr>
<td>Audio/visual recording</td>
<td>19</td>
<td>Did the research use audio or visual recording to collect the data?</td>
<td>Y p 25</td>
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<tr>
<td>Field notes</td>
<td>20</td>
<td>Were field notes made during and/or after the inter view or focus group?</td>
<td>Y p 20</td>
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<tr>
<td>Duration</td>
<td>21</td>
<td>What was the duration of the inter views or focus group?</td>
<td>Y p 25</td>
</tr>
<tr>
<td>Data saturation</td>
<td>22</td>
<td>Was data saturation discussed?</td>
<td>Y p 24</td>
</tr>
<tr>
<td>Transcripts returned</td>
<td>23</td>
<td>Were transcripts returned to participants for comment and/or</td>
<td>Y p 25</td>
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<td>correction?</td>
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<td><strong>Domain 3: analysis and findings</strong></td>
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<tr>
<td><strong>Data analysis</strong></td>
<td>24</td>
<td>How many data coders coded the data?</td>
<td>Y 2-3</td>
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<tr>
<td>Number of data coders</td>
<td>25</td>
<td>Did authors provide a description of the coding tree?</td>
<td>Y</td>
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<tr>
<td>Description of the coding tree</td>
<td>26</td>
<td>Were themes identified in advance or derived from the data?</td>
<td>Y 2-7</td>
</tr>
<tr>
<td>Derivation of themes</td>
<td>27</td>
<td>What software, if applicable, was used to manage the data?</td>
<td>Y 2-9</td>
</tr>
<tr>
<td>Software</td>
<td>28</td>
<td>Did participants provide feedback on the findings?</td>
<td>Pending</td>
</tr>
<tr>
<td>Participant checking</td>
<td>29</td>
<td>Were participant quotations presented to illustrate the themes/findings?</td>
<td>Y 2-3</td>
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<tr>
<td>Quotations presented</td>
<td>30</td>
<td>Was each quotation identified? e.g. participant number</td>
<td>Y 2-3</td>
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<tr>
<td>Data and findings consistent</td>
<td>31</td>
<td>Were there consistency between the data presented and the findings?</td>
<td>Y 2-3</td>
</tr>
<tr>
<td>Clarity of major themes</td>
<td>32</td>
<td>Were major themes clearly presented in the findings?</td>
<td>Y 2-3</td>
</tr>
<tr>
<td>Clarity of minor themes</td>
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Once you have completed this checklist, please save a copy and upload it as part of your submission. DO NOT include this checklist as part of the main manuscript document. It must be uploaded as a separate file.