The Development of the Enrolled Nurse Role in the Waikato Tainui Region, Aotearoa New Zealand

By

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Abstract

Introduction

Enrolled Nursing was introduced in Aotearoa New Zealand in 1939. Over the past 80 years, the Enrolled Nurse has undergone several changes: name, length of training, scope of practice and cessation and then re-introduction of training. This research was initiated from concerns raised by Enrolled Nursing students and graduates regarding the status and employment of Enrolled Nurses within the Waikato Tainui region. The study has developed from this and investigated the perception of the Enrolled Nurse scope of practice, employment opportunities, the role of the Enrolled Nurse within healthcare teams and regional and employer variances.

Due to the nationwide dissemination of the research information and electronic survey, further data collection has occurred from around Aotearoa New Zealand and is incorporated into the data.

Methods

The research uses a transdisciplinary framework and a mixed-method approach for data collection and Grounded Theory to review the qualitative data. It has a strong narrative focus with information analysed into themes and sub-groups from the participants.

Results

From the findings, a number of themes have emerged, including significant historical hurt and modern-day devaluing of the Enrolled Nurse role. In addition to this, confusion of the Enrolled Nurse scope of practice, regional and employer differences are also noted. Competition is apparent with other health roles for employment and remuneration and in particular with the non-regulated health workforce. Furthermore, role progression and professional development opportunities are limited in areas, and variable support for the Enrolled Nurse role is apparent.

However, the research has highlighted positive examples of Enrolled Nurse integration in the health workforce of Aotearoa New Zealand. A number of Enrolled Nurses and employers are forging new ground, models of care and

developing opportunities for role expansion, allowing nurses to work to the top of their scope.

Conclusion

In conclusion, the Enrolled Nurse has a tenuous position within some areas of the health workforce. A more structured and definitive role for the Enrolled Nurse is required within the Aotearoa New Zealand health and nursing workforce, particularly as Registered Nurse roles change, population needs grow, and care become more complex. The Enrolled Nurse is in an ideal position to support the nursing team, provide specialist nursing care and have a broader contribution in a more comprehensive range of care delivery models and environments.

There is a unique and differentiable role for the Enrolled Nurse in the structure of patient care within Aotearoa New Zealand.

Limitations

The primary focus for the study was the Enrolled Nurse within the Waikato Tainui region. With the wider dissemination of the survey information, this has now included a nationwide flavour with responses from other areas of Aotearoa New Zealand. Rural communities and the role of the Enrolled Nurse within those hard to staff communities was also raised in the study. Furthermore, the disparity of Māori nurses to population needs was also discussed.

A limitation of the study was the inability for a more in-depth look at the role in other regions and the health workforce in rural communities, and the lack of Māori nurses within Aotearoa New Zealand.
These areas of research are the foundation of further collaborative studies.

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List of Acronyms

ARC	Aged Residential Care
EN	Enrolled Nurse
EPG	Employer Partnership Group
NCNZ	Nursing Council of New Zealand
NZNO	New Zealand Nurses Organisation
NP	Nurse Practitioner
PHO	Primary Health Organisations
RN	Registered Nurse
TMO	Tihei Mauri Ora
TDR	Transdisciplinary Research
Waikato DHB	Waikato District Health Board
Wintec	Waikato Institute of Technology

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Chapter 1. Introduction to the Researcher and the Study

1.1 Introducing the Researcher

I am a first-generation ‘Kiwi” of Scottish and English parents who immigrated in the late 1940s and early 1960s; my mother being a “10-pound pom” who came to New Zealand to continue her nursing career. I grew up in South Auckland, New Zealand, in the late ’60s, the youngest child of a mixed cultural and blended family, with my brothers being of Ngāpuhi descent. My children are from Te Uri o Hau iwi within the wider Ngāti Whātua confederation, Scottish and English.

I trained as a registered nurse in the mid-1980s at Northland Polytechnic, Whangarei, Aotearoa New Zealand. I was the third annual intake for the Polytechnic at a time when Aotearoa New Zealand was transitioning from hospital-based study to polytechnic study.

The registered nurse qualification at this time was a Nursing Diploma. The diploma was a three-year qualification involving travel all around Northland and down to Auckland and beyond for clinical placement and experiences including an addictions placement for Drug and Alcohol on Rotoroa Island, Hauraki Gulf, Auckland, and Kingseat Psychiatric Hospital. We studied a variety of topics and were known as New Zealand Registered Comprehensive Nurses. Our studies also included mental health and addictions and obstetrics/midwifery. Nursing training has since evolved into a three-year degree programme and is known as a Bachelor of Nursing, national qualification, endorsed by Nursing Council of New Zealand. Nurses who are registered may continue to higher education to become specialists in their field, management, educators, academics or Nurse Practitioners.

I trained alongside Enrolled Nurses in training at Whangarei Hospital. We lived together in the Nurse’s Home, socialised together and worked together on the wards. We formed friendships, both professional and personal.

On graduation, I obtained a position as a Staff Nurse at Whangarei Base Hospital, 1988. For my inaugural placement as a new graduate Registered Nurse, I was assigned a Senior Enrolled Nurse as my preceptor. Preceptors

support newly graduated nurses into practice and is standard practice across the country still today. My preceptor supported my transition into my role by providing me with practical and pragmatic advice, guidance and support. On reflection, this had a significant impact and was pivotal in my understanding of the Enrolled Nurse role. I gained knowledge of her position by working alongside her daily, noting her expertise and skill and the way she interacted with other nurses, received direction and delegation and contributed to the broader team functioning. My preceptor was an integral part of a busy acute ward.

Other career highlights have included memorable moments when outstanding Enrolled Nurse colleagues have supported my Registered Nurse role. We have worked collaboratively as a team, each other knowing our scope and areas of speciality, abilities and limitations, both professionally and personally. This teamwork provided a synergy for both roles and contributed to the clinical situation by providing a solid foundation and understanding where we worked intuitively together.

I have worked in various settings since commencing training in 1985, including District Health Boards, Not-For-Profit Organisations, aged residential care facilities, and health services. My roles have included Registered Nurse, Educator and Health Promoter, Clinical Nurse Specialist, Manager of a Traumatic Brain Injury Unit and now as a Senior Academic Staff Member at Waikato Institute of Technology (Wintec), Hamilton. My nursing career has spanned 35 years, and I am still learning. I now co-ordinate and teach the modules *of "Nursing as a Profession", "Foundations for Enrolled Nurse Practice" and "Rehabilitation"* in the 18-month New Zealand Diploma of Enrolled Nursing programme and teach within the Bachelor of Nursing three-year degree programme.

I am a member of the New Zealand Nurses Organisation College of Gerontology Nursing Section National Committee, and a member of the Nursing Council of New Zealand Competency review team. Further studies have included a Post Graduate Diploma in Health Science (predominantly focused on gerontology and health services), Certificates in Adult Teaching and Adult Tertiary Education, Post Graduate Certificate in Transdisciplinary Research and Innovation and a wide range of workshops and educational sessions related to employment

positions and interests. From my studies and teaching commitments, I have developed a keen interest in the impact of education on people's lives and the subsequent successful employment into the health workforce.

1.2 Introducing the Research

The impetus for this research came from anecdotal stories relayed by Enrolled Nurse students and graduates. They discussed their difficulties with employment and an apparent lack of understanding about the Enrolled Nurse scope of practice by other health professionals. Scope of practice is the specific area within which a nurse can practice and is related to their qualification. The scope limits or provides boundaries for nurses. For example, my qualification is as a Registered Comprehensive Nurse, and I have no specific conditions upon where I can work. Conversely, a Registered Psychiatric Nurse can only work in the mental health setting (Nursing Council of New Zealand, 2019d).

The Enrolled Nurse scope of practice works within the following boundaries:

- Enrolled nurses practise under the direction and delegation of a registered nurse or nurse practitioner. They deliver nursing care and health education across the life span to health consumers in community, residential or hospital settings.

- Enrolled nurses contribute to nursing assessments, care planning, implementation and evaluation of care for health consumers and/or families/whānau. The registered nurse maintains overall responsibility for the plan of care.

- Enrolled nurses assist health consumers with the activities of daily living, observe changes in health consumers' conditions and report these to the registered nurse, administer medicines and undertake other nursing care responsibilities appropriate to their assessed competence.

- In acute settings, enrolled nurses must work in a team with a registered nurse who is responsible for directing and delegating nursing interventions.

- In some settings, enrolled nurses may coordinate a team of health care assistants under the direction and delegation of a registered nurse.

- In some settings, enrolled nurses may work under the direction and delegation of a registered health practitioner. In these situations, the enrolled nurse must have registered nurse supervision and must not assume overall responsibility for nursing assessment or care planning.

- Enrolled nurses are accountable for their nursing actions and practise competently in accordance with legislation, to their level of knowledge and experience. They work in partnership with health consumers, families/whānau and multidisciplinary teams.

(Nursing Council of New Zealand, 2019c)

The students were asked why they were training to be an Enrolled Nurse and not a Registered Nurse. Comments were made by a variety of health staff, including Senior Registered Nurses in clinical settings. Remarks such as "why do you want to be an EN - there aren't any jobs anyway" were disheartening for students and myself alike. The students felt they needed to defend their career decision.

Other areas of interest I have are rural inequities within service delivery, future nursing workforce needs and the success of students, particularly our Māori students. The Waikato District Health Board has approximately 23% Māori population within its region. The region's nursing population has 8% Māori nurses to support this population (Waikato Institute of Technology, 2016). All students must be supported to be successful in their programme of study. However, a specific focus must be on positive learning outcomes for Māori students in particular. These graduate nurses will potentially support their own whānau and Iwi, and help reduce Māori health inequalities, an area of importance for me both professionally and personally with family ill health.

Having participated in successful community-wide projects in the 1990s, transdisciplinary research and innovative methodology appealed to me when considering furthering my studies. It seemed timely then to take a formal approach to these thoughts and to enrol in a programme that considered a

variety of viewpoints and fostered this philosophy while examining real-world issues.

1.3 The “Wicked Problems” Identified

The “wicked problems” for Enrolled Nurses are multi-faceted and cover a broad range of concerns. I will return to the concept of a wicked problem in section 2.1.1.

As discussed by Roberts (2000), there is no definite statement of a problem but more of a broad disagreement of what ‘the problem' could be.

The following concerns were raised:

- marginal employment opportunities within the Waikato Tainui region
- confusion of scope of practice of the Enrolled Nurse by health professionals including nurses
- competition with other roles for jobs and remuneration

Suffice to say as outlined by Roberts, there is no clear-cut statement but more of a general disagreement of what the problem could be.

1.4 Research Statement

Enrolled Nursing holds a variable position within the national health workforce. This study highlights challenges and opportunities and discusses external factors that impact on this nursing role. There is a unique and definitive position for Enrolled Nursing within Aotearoa New Zealand, the key, however, is to address the circumstances under which they practice.

The question to be considered is how might we empower the Enrolled Nurse role and enable their value production at a level of visibility where they can showcase their knowledge and skills? What innovations may be derived from a collaborative co-creative space to develop the role in a practising health delivery community? This research contributes towards and uncovers a shared understanding of challenges and opportunities faced by the Enrolled Nurse in today’s nursing workforce.

1.5 Potential Significance of the Study

- To raise awareness and increase understanding of the Enrolled Nurse role, their knowledge and skill base
- To promote collaboration, teamwork and inclusivity of the Enrolled Nurse within the nursing and inter-professional environment.
- To consider further employment opportunities for Enrolled Nurses
- Enhance collaboration between employers/health providers on the role of the Enrolled Nurse
- To discuss the Enrolled Nurse role particularly within rural areas to assist in addressing rural inequities of health delivery
- Ascertain and share positive examples of the Enrolled Nurse role

Chapter 2. Literature Reviews

Two literature reviews were completed for the Post-Graduate Certificate in Transdisciplinary Research and Innovation before the commencement of the research. The reviews were conducted to establish the need for further investigation and formed the foundation for the Masters' study. These centred on transdisciplinary research (TDR) and Enrolled Nursing within the Waikato Tainui region. The literature reviews were extensive to cover the many different aspects of TDR and this topic of enquiry.

I have used the name Waikato Tainui in this research as this encompasses a broader understanding of the area and its people, rather than just the geographical land definition of the region. Waikato Tainui is home to Māori who share their ancestry from the Polynesian migrants who arrived in Aotearoa New Zealand on the Tainui waka (canoe). They travelled across the Pacific Ocean from Hawaiki to Aotearoa New Zealand approximately 800 years ago (Swarbrick, 2019a). Waikato Tainui is the centre for Māori Kīngitanga, and the home of the Māori King Te Arikinui Tūheitia Paki, at Tūrangawaewae Marae in Ngāruawāhia. The Kīngitanga or Māori King Movement originated in 1858. It was a way to unite the tribes of Aotearoa New Zealand against the colonial British settlers, marginalisation and the Crown's demand to purchase land (Swarbrick, 2019b). Waikato Tainui is a tribal organisation that is governed by Te Whakakitenga o Waikato. It represents 68 marae and 33 hapu (sub-tribes) from Auckland to King Country, Kāwhia and Hapuakohe and Kaimai Ranges. Te Whakakitenga o Waikato is responsible for over 70,000 tribal members who are within this area. Te Whakakitenga o Waikato is made up of a number of organisations within this area and they are now collectively known as Waikato Tainui (Waikato-Tainui, 2019, p. 12).

The first review considered transdisciplinary research methodology and the second, the role of Enrolled Nursing within Aotearoa/New Zealand. The second review reflected on the history and role of Enrolled Nurse, rural health inequities and the healthcare workforce, Māori engagement in nursing and the potential socio-political-fiscal changes brought about by the recent increase in remuneration for Health Care Assistants (Health Central, 2017a). These literature reviews were submitted to Wintec for the completion of the Post

Graduate Certificate in Transdisciplinary Research and Innovation and in preparation for the Master's programme. Please see Appendices IV and V for the Literature Reviews.

I utilised the Wintec library hard copy publications and databases such as EBSCOhost and stakeholder publications. Publications 10 years or less were the primary source for research. However, older papers are included due to their historical relevance, such as Basarab Nicolescu (2006). Findings of importance from the literature review are discussed in the following section and support the research methodology.

2.1. Transdisciplinary Research

In preparation for this study, I needed a definition of TDR, and I discovered a number of them. Westberg and Polk (2016) present TDR as a way to "address the complexity of societal problems through the exchange of knowledge and expertise across diverse groups of societal actors" (p. 385). Similarly, Wickson, Carew and Russell (2006) determine TDR as focusing on complex and multi-dimensional problems and involving and developing shared methodology with multiple disciplines. The definition of transdisciplinary research appears to have a variety of interpretations. Hoffmann-Riem, Biber-Klemm, Grossenbacher-Mansuy, Hadorn, Joye, Pohl, Wiesmann and Zemp (2008) discuss the term transdisciplinary research, and define TDR as ranging from a diffuse conceptual term involving individual disciplines to any research involving stakeholders. Academic literature uses the terms 'actors' interchangeably with 'participants', 'stakeholders' and 'non-academic actors' describing the individuals who work within the TDR framework (Hoffmann-Riem et al., 2008; Mauser et al., 2013; Wickson, Carew & Russell, 2006). Others suggested the critical difference between transdisciplinarity and interdisciplinarity is the deliberate collaboration and intentional involvement of stakeholders in the identification of problems and the co-creation of solutions (Wickson, Carew & Russell 2006; Thompson-Klein, 2004; Mobjörk, 2010).

I learnt from my enquiry that TDR involves the collaboration of a diverse number of interested people, focusing on a complex societal problem and co-creating innovative sustainable solutions for this problem.

2.1.1. Wicked Problems

In considering the notion of complex societal problems, the phrase “wicked problems” emerges (Mobjörk, 2010, p. 869). These “wicked problems” are complex and require a multi-faceted approach by a variety of stakeholders to find creative and flexible solutions. Roberts (2000) identified four features of “wicked problems”. Firstly, Roberts asserts there is no definite statement of a problem but a more of a broad disagreement of what it could be. Secondly, the exploration of solutions is unrestricted and dependent upon stakeholder points of view. The third characteristic is the problem-resolving process being multifaceted due to limitations such as resources or politics. Finally, Roberts identified that these limitations also change as stakeholders change, fail to communicate or change the parameters by which the problem must be solved (p. 1).

I considered the concerns raised about Enrolled Nursing to be wicked problems due to the complexity, variety of stakeholders and viewpoints involved and the impact of resources and politics.

As identified by Dorst (2018) organisations facing complex problems need to become more flexible in the way they respond to these problems. Dorst suggests a design-based approach which creates a framework for mixing practices, creating new insights and “action in the space between established professions” (p. 60).

This approach uses a framework of Design Thinking, which critically examines all aspects of an issue before deciding the best action to take (Purdy & Popan, 2018). The Design Thinking framework uses four main rules to oversee the process: emphasis on the needs of people rather than technical experimentation, ambiguity to guide the search for possible solutions, redesign using traditional and innovative thinking, and finally the focus on improving communication throughout the process (Purdy & Popan, 2018). McLaughlin, Wolcott, Hubbard, Umstead, and Rider, (2019) discuss a five step framework discussed focuses on empathy, definition, ideation, experimentation and evolution (p. 2).

From my involvement throughout this project with Design Factory New Zealand, I have identified similarities between the characteristics of Design Thinking and Transdisciplinarity. They are both complex problem-solving strategies. Brown (2008) discusses the characteristics of design thinking being human-centred, creative, iterative, and a practical approach to find the best ideas and ultimate solutions. These characteristics have similarly been attributed to transdisciplinarity. On reflection, perhaps it is more that traits present in a transdisciplinary design, are included in what we recognise overall as Design Thinking (Moreno & Villalba, 2018). These transdisciplinary traits are highlighted in the literature review and have guided the processes for reviewing the complex, wicked problems associated with Enrolled Nursing in Aotearoa New Zealand.

The TDR framework and the Design Thinking framework is applicable to a range of real-world societal issues. Hadorn et al. (2008) discuss case studies and real-world examples and include topics such as sustainability of the river and mountain environment, fishing and declining fish numbers and climate protection and toxic chemicals. TDR is also used to address health issues, for example, cardiovascular disease (Cooper, Carson, Noronha, Huizinga, Roter et al., 2013) and health disparities outlined by the Federal Collaboration on Health Disparities Research (Rashid, Spengler, Wagner, Melanson, Skillen et al., 2009). The World Health Organisation (WHO) endorses the use of TDR methodology to improve emergency responses to worldwide disasters (World Health Organisation, 2012). I concluded that the TDR framework was ideal to approach the wicked problem of Enrolled Nursing.

2.1.2. Partnerships, Stakeholders and Collaboration

As TDR involves various actors/stakeholders from outside academia, focussing on real-world issues (Binder, Absenger-Helmli & Schilling, 2015, p. 546), this research involved collaboration with various stakeholders in Waikato Tainui and other regions of Aotearoa New Zealand. This study included non-academic partners or actors in research (Binder et al., 2015; Schauppenlehner-Kloyber & Penker, 2015; Belcher, Rasmussen, Kemshaw & Zornes, 2016; Westberg & Polk, 2016; Smith, 2007; Hospes, Kroeze, Oosterveer, Schouten & Slingerland, 2017).

The inclusion of partners outside of a research context and/or science discipline allows a more holistic viewpoint. Scholz and Steiner (2015) identified societal actors as having differing world views. Some have goals to improve their business or manage actual issues. In contrast, other researchers/scientists seek to grow theoretical knowledge contributing to a better understanding of the real world. Klein (2008) recognised the importance of having experts from the "problem space" because the group as a whole form an "appropriate interdisciplinary epistemic community" (p. 121).

I felt this aspect of TDR was significant for the study as the research involves, and impacts upon nurses, health providers and academics. Through the lens of TDR, diverse voices could be heard.

The construction of the team and acknowledgement of differing viewpoints are essential components of the transdisciplinary research process (Hall et al., 2012). Differences of opinion of a TDR research group need to be resolved. It is particularly crucial for the outcome of the societal problem and the potential solution when participants disagree. Gray (2008) confirms this by stating that "in transdisciplinary projects, misunderstanding and disagreement are much more likely" (para. 5).

Careful selection and facilitation of group members from varying cohorts is necessary for the individuals and the group to establish effective relationships and appreciate different worldviews and perspectives. In addition to this, the group also shares the workload, knowledge and experiences and the development of interventions (Hoffmann-Riem et al., 2008; Westberg & Polk, 2016). Cooper et al. (2013) suggest "partners share responsibilities and experience co-ownership" through the development of "sustainable community-based interventions and relevant policy" (p. 33). I observed this co-ownership throughout the project, particularly when discussing potential innovations with stakeholders and their enthusiasm about the roles they could play.

Positive outcomes from partnerships are apparent in TDR and comprise network building, trust in others, understanding of others, community identification due to involvement in a TDR project, and knowledge generation and sharing by the participants (Walter, Helgenberger, Wiek & Scholz, 2007, p. 334). From this, mutual and transformational learning occurs through the TDR framework and

denotes learning that “leaves a legacy” (Mitchell, Cordell & Fam, 2015, p. 93).

Transdisciplinary research is not a quick fix easy solution, but rather a longer-term process and work-in-progress for those working with the societal problem. I concluded from this literature review that this would be the case for this study, due to the complex nature of the problem, the diversity of potential stakeholders and subsequent innovations.

An example of the complexity of TDR research is a 10-year longitudinal research project looking at building resilience to natural hazards and disasters in Aotearoa New Zealand. *Resilience to Nature's Challenges – Kia manawaroa–Ngā Ākina o Te AoTūroa* (Resilience Challenge) is a government-funded 10-year transdisciplinary research project with a mission to enhance Aotearoa New Zealand's resilience to natural disasters. It is funded by the New Zealand Ministry of Business, Innovation and Employment (MBIE) (Thompson, Owen, Lindsay, Leonard & Cronin, 2017).

The study focuses on participants’ perspectives of TDR, including benefits and challenges, and potential tensions. The research undertaken by Thompson, Owen, Lindsay, Leonard, and Cronin et al. (2017) uses a mixed-method approach of online surveys and semi-structured interviews. Thompson et al. affirm that "evaluating stakeholder perspectives and expectations early in the TDR process gave insight into how attitudes, expectations and conflicts might shape TDR efforts and provide parameters for assessing change over time” (p. 30). This is prudent advice and may well determine the success or otherwise of TDR projects. Analyses by Pohl, Rist, Zimmerman, Fry and Gurung et al. (2010) and Rosendahl, Zanella, Rist, and Weigelt (2015) noted that individual and social perspectives could impact decisions, methods of engagement and overall results of large transdisciplinary projects. This practical advice was essential to know as the topic at times felt unwieldy and multi-dimensional.

Furthermore, Thompson et al., (2017) identified that as stakeholders involved in TDR projects come from a wide range of backgrounds, this presented additional challenges for the project: the time required, building relationships, trust, conflict of methodology, and the challenge of bringing diverse research priorities and practices together. Moreover, the participants reported conflict when carrying

out new modes of knowledge production and research within "entrenched institutional structures" (p. 37), limiting researcher participation due to institutional policies, resources and competing academic programmes. In addition to this is the expectation for single-discipline research and subsequent publication (p. 38). Friction was felt between participants wishing to be part of the TDR approach, and difficulty to do so by high demands on time and resources in their day to day roles (Thompson et al., 2017).

Despite this, participants understood the concept of what embodied TDR or "co-creation" and that different worldviews were embraced in the process. Furthermore, the participants in this study were keen to adopt TDR approaches and viewed this as a way to create “useful solutions to societal problems in practice” (p. 38). Personal rewards such as feelings of inclusion, empowerment and involvement in societal changes were a strong motivation for their participation. Furthermore, the participants considered it essential to connect with existing networks already participating in on-going initiatives similar to the transdisciplinary project, and not re-invent the wheel, but use the experts and resources currently available. From my experience, this was a vital component and an integral part of the study. Authentic voices and viewpoints were heard from a wealth of world views, creating a strong narrative and foundation for change.

Practical day to day challenges, however, can exist for participants. Institutional support for a TDR project, particularly for participants from within academia is imperative. While Jahn, Bergmann, and Keil (2012) discussed TDR being “far from academically established” and, practices “do not effectively support it at universities and research institutions” (p. 1). This is not the case eight years on from these statements, or, within my research environment. This programme of study for the Master of Applied Innovation is aligned with Design Factory New Zealand and provides a supportive team environment for studies and research. The Design Factory Global Network is well established and promotes design thinking and transdisciplinarity across five continents and in 26 different locations. These hubs are situated within universities and research organisations.

Despite the potential challenges and conflicts suggested by others, I believe this provided a robust foundation for discussion and integration of a diversity of world views and stakeholder needs within this study. Overwhelmingly was the strong sense of goodwill for the research and desire to be involved in future studies and implementation of innovations.

2.1.3. Teamwork

Historical approaches to research have played a significant part in the need to consider a TDR approach to address societal problems today. Information from the literature review completed for the Post Graduate Certificate is included here due to its importance (Appendix IV). Mauser, Klepper, Rice, Schmalzbauer, Hackmann, Leemans, and Moore (2013) state the specialisation and fragmentation of science disciplines have produced knowledge of quantity and quality. However, disciplines have become isolated within their cultural context. This isolation has not helped researchers to manage the complexity of real-world problems, despite having the essential knowledge methods and tools available (p. 422). Transdisciplinarity overcomes these limitations by involving various disciplines with different viewpoints to find workable, sustainable solutions.

Mauser et al. (2013) put forward a framework for integration across research disciplines: co-design of the research, co-production of knowledge and co-dissemination of the results (p. 428). This framework supports the inclusive nature of the TDR process and the diverse make-up of a TDR team. Valuing knowledge and skills of team members, clear communication, trust among the team and team members being competent in their disciplines was deemed necessary by Dyer (2003). Research leaders must, therefore, be skilled to manage people, differing worldviews and bodies of knowledge (Roux, Stirzaker, Breen, Lefroy & Cresswell, 2010).

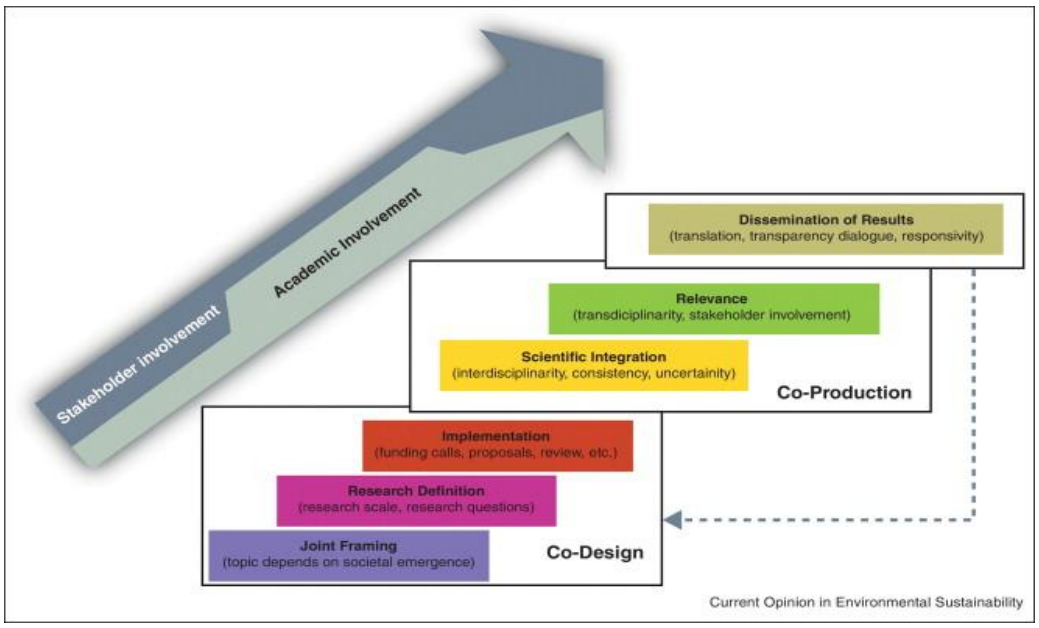


Figure 1: Framework for TDR integration across research disciplines (Mauser et al., 2013, p. 427) image used under Creative Commons license CC BY-NC-ND 3.0

Schauppenlehner-Kloyber and Penker (2015) proposed five strategies to manage group processes (p. 69). These are:

- TDR intervenes in societal systems and shapes stakeholders' experiences
- Complex process designs require professional communication and management
- Groups are at the core of TDR activities and financial and personnel resources, space and time is needed for a TDR project
- Consideration of group process and development over time contributes to effective working processes and outcomes
- Turning results from the TDR into action requires complex learning processes for all in the group and impacts on society. In essence, an individual may now have a broader understanding of the problem which impacts their own interactions and decision making with their cohort.

Participants in TDR projects are there for the length of the research project, and the team involves a diverse group of participants with a variety of worldviews (Bergmann, Klein & Faust, 2012; Binder et al., 2015; Mauser et al., 2013; Roux et al., 2010).

Teams involved in transdisciplinary research evolve into groups with speciality knowledge of the wicked problems being addressed. These teams could be likened to Communities of Practice as proposed by Lave and Wenger (1991) where people form a group with a common interest in a particular area and share knowledge and experiences. Communities of practice share three specific characteristics: domain, community and practice. The 'domain' is a shared area of interest between members. The 'community' are members sharing and engaging in combined activities and discussions, helping each other and sharing information. The 'practice' is a group of practitioners who develop a collection of resources, shared experiences, tools, and ways to address recurring issues (Wenger & Trayner, 2015). In moving forward with the study, I felt the Community of Practice concept would fit well within the team environment of TDR.

In transdisciplinary research, teams have a common interest in a particular area and share their experiences, knowledge and world views while developing an understanding of a specific issue and finding workable solutions. This process also requires an individual methodology, as noted in the following section.

2.1.4. Individual project methodology

As identified by Bergmann, Klein and Faust, (2012), the methods of TDR research and knowledge integration relate to a specific societal problem. Therefore the research team will consist of members from various disciplines, scientific fields and alongside participants associated with that societal problem. An essential consideration in TDR research is that each "wicked problem" will have its own distinctive methodology, research team and detailed solution or solutions. In essence, there is no 'one size fits all'. Bergman et al. (2012) state if researchers want to apply these methods to any other transdisciplinary problem, the methods must be "de-coupled or de-contextualised" (p. 20). The selected strategy must also be reassessed frequently and revised if needed throughout the research process. Bergman et al. (2012) describe this as the principle of recursiveness as each step of the process is subject to iteration. Each step requires review, given the diversity of people involved, ensuing discussions held, and alterations made. Vilsmaier and Bergmann (2013) further examine the fundamental concepts of TDR and its methodology: integration, collaboration,

mutual learning, problem framing, co-production of solutions, and bringing the solution to fruition.

Further discussion on the above methodology by Bergmann, Klein, and Faust (2012) examines three dimensions of integration. Firstly, cognitive-epistemic explores individual differences and similarities of science and practice and the development of new methods together. Secondly, the social and organisational element considers the varying interests and activities of the research group focusing on leadership, mutual understanding and the group's willingness to learn. Finally, communication links various communication styles, expressions and practices to find a common understanding (Bergmann, 2017).

Binder et al. (2015) describes practical elements in establishing a TDR project and proposes three phases:

1. Problem framing and team building
    - team members clarify their perspectives, problems and expectations and agree on a comment set of goals for the project
2. Project partners focusing on project work
    - individual participants focus on various components of the project and may involve participants outside the group
3. Co-generation of knowledge and knowledge integration.
    - Outcomes of the research are identified for the groups of participants – practitioners look to solve societal problems or see transformations, scientists look for new knowledge regarding theory or methodology.

This last phase is the process for making the results useful for all parties. It facilitates understanding of the problem and the processes needed for developing a sustainable solution for all (p. 546).

Hadorn et al. (2008, p. 35) also identified the three phases of transdisciplinary research: problem identification and structuring, problem analysis and bringing results to fruition.

Roodt (2020) describes transdisciplinary research as a recursive process whereby existing knowledge combined with new concepts co-create an updated construct. This new construct is utilised within current work. See Figure 2 p. 29.

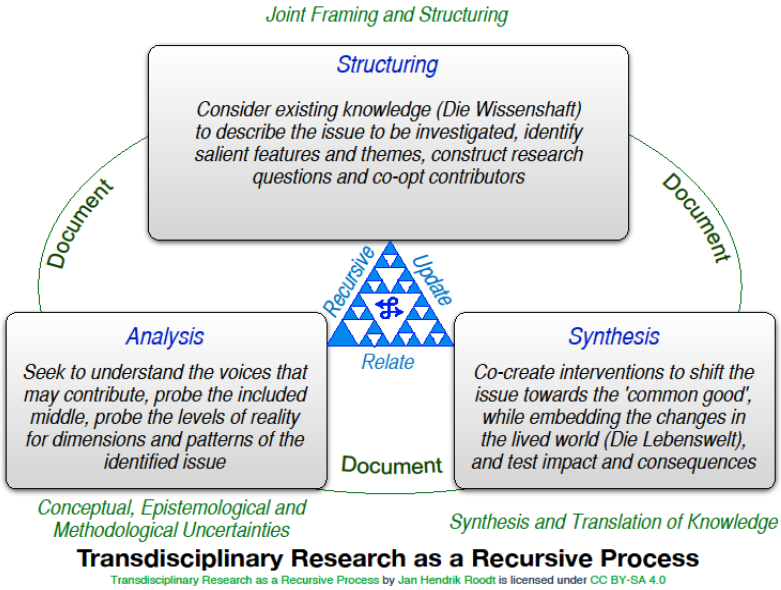


Figure 2 Transdisciplinary Research as a Recursive Process (Roodt, 2020) licensed under CC BY-SA 4.0

In unravelling the intricacies of the societal problem, I needed a logical approach to frame, analyse and process the area of concern as suggested by Pohl (2011). Pohl and Hadorn (2008, pp. 431-432) had identified three types of knowledge that are part of a TDR project: systems, target and transformational knowledge, as noted in the Post Graduate Certificate literature (Appendix IV). Firstly, systems knowledge identifies the problem and the difficulties with transforming the problem and concept into a workable solution. Target knowledge looks at the need for change, potential outcomes and improved practices. Transformational knowledge looks at cultural, ethical, technical, sustainable, political and social components when transforming current practice into improved practices.

Several frameworks and processes describe the transformation of problems into solutions in TDR research (Bergmann, Klein & Faust, 2012; Binder et al. 2015; Hadorn et al. 2008; Pohl, 2011). Wickson et al. (2006) add to the picture by declaring there is no single methodology for TDR, and methodologies used in TDR need to respond to and be reflective of the problem and situation under investigation (p. 1049). They continue by stating “transdisciplinarity is characterized by an interpenetration of epistemologies in the development of methodology” and the “dissolution of disciplinary boundaries is necessary for the

construction of novel or unique methodologies tailored to the problem and its context" (p. 1050), as noted in the Post Graduate Certificate literature review.

For a novice researcher such as myself, this did not provide clear guidance, and further analysis was undertaken. Other literature revealed it was acceptable to use traditional forms of research methods in TDR projects: mixed-method (Thompson et al., 2017), quantitative and qualitative methods (Krettek & Thorpenberg, 2011; Claasen, Covic, Gildenhuys, Idsardi, Lemke & Sandham 2015). The most reassurance was provided by Leavy (2016) , who stated "any TDR design can use any method in pursuit of the research objective" (p. 54) and methods were only tools for data collection. Leavy provides a sense of comfort that researchers can still use traditional methods - it is more the philosophy and process that defines transdisciplinary research.

2.1.5. Reflection in Transdisciplinary Research

Researchers have highlighted the importance that reflection plays in TDR (Finlay, 2002; Palaganas, Sanchez, Molintas, & Caricativo, 2017; Patnaik, 2013). The need to reflect, review and reiterate the research process is essential to producing solutions that are fit for purpose and meaningful to the context. Reflection and reiteration are equally important at the group and individual levels: the group level when participants are together considering the project and the individual level when considering a researcher's involvement.

Reflection for researchers is therefore essential, as the researcher's worldview and potential areas of bias may impact on the understanding of the problem, research method, design and solutions (Wickson et al., 2006). This reflection contributes to the deconstruction of current knowledge and the rebuilding of new group and individual bodies of knowledge (Wickson et al., 2006, p.1053-1054). This deconstruction and co-creation of knowledge is further elaborated by Popa, Guillermin, and Dedeurwaerdere, (2015) who proposed four main characteristics of reflexivity related to TDR:

- collaborative deliberation to develop a shared understanding of a problem;
- the social relevance of the problem framing;
- social experimentation and collective learning processes;

- critical and transformative character of the research agenda.

Reflection is therefore required in all stages of TDR from discussing the problem and its societal relevance, formulating the action plan and reviewing learning outcomes to the contribution of the research and transformation of the problem (p. 3). As the researcher for this project, I have highlighted my process for reflection. Please section 2.2, p.51.

With the diversity of worldviews and knowledge within the stakeholder group, reflection is essential for each member to understand each other and the "wicked problem". Roux, Stirzaker, Breen, Lefroy, and Cresswell (2010) propose the idea of co-reflection by the entire stakeholder group – and support the aspirations of individuals, sub-groups and research funders. Roux et al. (2010) introduced the need for a facilitated workshop at the commencement of the research and then regularly after that to enable "learning by doing" (p. 735). This co-reflection offers opportunities for stakeholders to understand each other's worldviews better while working collectively towards a "defined social purpose or aspiration goal" (p. 737).

To assist the process of teamwork, reflection and reflexivity the notion of reflexive monitoring is discussed by Botha, Klerkx, Small & Turner (2014) who examine the need for researchers to have new roles in supporting processes in different ways. These may include experts, facilitators, and designers for monitoring and supporting reflection. Team members are given positions within the project to act as monitors of the team processes. This idea of reflexive monitoring is explained further by van Mierlo, Regeer, van Amstel, Arkesteijn, Beekman and Volkert (2010). Van Mierlo et al. suggest Reflexive Monitoring in Action (RMA) helps participants to "keep reflecting on the relationships between the key items: the ambitions of the project, usual practices and the way these are embedded in the institutions, plus the developments in the system that offer opportunities for realising the ambitions of system innovation" (p. 11). Monitoring is not a separate action but a part of the overall team and research processes.

In summary, each researcher's understanding of the problem, process and solution moulds individual contributions to the research. Members of the group reflect with each other to create new understandings and bodies of knowledge to find workable solutions for the “wicked problem/s”.

2.1.6. Learning

Learning as an outcome of TDR has been a critical component of this study for me, and I am confident my newfound knowledge and relationships will stay with me for future studies and change. I concur with Mitchell et al. (2015) who discuss transformational learning as leaving a legacy and contributing to changing a situation, with learning having an impact beyond the life of a project. This impact includes relationships, interactions and communications within the stakeholder group that supports collective discussions and decision-making and doing things differently. Polk and Knutsson (2008) focus on “informal exchanges of knowledge and experiences based on reciprocity and reflexivity” (p. 646) and the learning aligns with social, individual and group understanding of a specific phenomenon.

This concept of learning is further defined by Vilsmaier, Engbrs, Luthardt, Maas-Deipenbrock, Wunderlich, and Scholz, (2015) who affirm that learning is a core element of TDR. It allows for “integrating knowledge and experiences gained in different contexts, including the building of consensus about necessary transformations to reach sustainable solutions” (p. 563).

This new understanding often requires negotiation and compromise in TDR to overcome differences and establish ways of working together within a diverse group of societal actors. Star and Griefsemer (1989) introduced the concept of boundary objects to help stakeholders involved in the TDR process co-operate despite differing and conflicting worldviews. Boundary objects are a means of communication and can be simple tools familiar to individual members in the group but used and viewed from individual perspectives. Examples of boundary objects could be assessments, data, or objects such as maps, timelines or collections (Leeds-Hurwitz, 2014). Boundary objects allow for common ground amongst a range of people and are considered important to learning because they facilitate people to connect with a shared focus (Hawkins, Pye & Correia, 2017).

Learning is, therefore, an individual and a group process. It involves the integration of diverse bodies of knowledge and development of common terminology and understandings. Furthermore, balancing individual world views and agendas requires negotiation and compromise, while merging diverse socio-political and cultural viewpoints for a workable group outcome.

2.1.7. Evaluation

Evaluation is the final step of a TDR project. Given the complexity of societal problems and the complex solutions required, this can present some difficulty. Wickson et al. (2006) identify two practical frameworks used for evaluation. The first framework reviews the problem, methodology and problem context, epistemology and challenges. (pp. 1055-1056).

The second framework stated by Wickson et al. (2006) supports Glassick, Huber, Maeroff, and Boyer's (1997) framework of evaluation. Wickson et al. have adapted this framework. The six defined areas for TD evaluation are responsive goals, extensive preparation, evolving methodology, significant outcome, effective communication and communal reflection (pp.1056-1057).

In review, TDR methodology involves fluid processes that focus on integration and collaboration and responding to people, problems and the context of the research. TDR can utilise any traditional research methods, and the methodology evolves over time due to several factors. These factors include evolving “wicked problems”, various stakeholders, variable epistemologies, knowledge and practice, reflection and iteration. Team processes are also key components within TDR and involve team building, communication, management and facilitation. Furthermore, adequate resourcing is required to support the research process and the participants. Finally, regular reflection and evaluation are necessary to monitor progress. Fam, Palmer, Riedy and Mitchell (2016) summarised the essence of transdisciplinary research as social practices that are interwoven, taking shape in different forms and contexts.

In conclusion, Transdisciplinary research focuses on real-world societal issues, utilising the skills and talents of expert stakeholders to co-create a workable, real-world sustainable solution. Stakeholders involved in finding solutions come

from a variety of fields. They are both academic and non-academic, and solutions can evolve and change dependent upon people and resources and politics.

This literature review has considered many aspects of the transdisciplinary research process, including the definition and typical characteristics of TDR and noted benefits and challenges. The diversity of the TDR stakeholder team is highlighted and comprises both academic and non-academic participants, noting the importance of communication and collaboration within the team. Group and individual reflection, learning and knowledge deconstruction and co-creation are also critical features of TDR. Furthermore, various methodologies can be used to support the iterative process and use the principle of recursiveness, while the concept of fluidity and evolving methodology of the TDR research is an over-arching principle.

2.2. Enrolled Nursing in Aotearoa New Zealand

The second literature review investigated Enrolled Nursing within the Aotearoa New Zealand nursing workforce. Nursing in Aotearoa New Zealand consists of three tiers of regulated nursing positions: Nurse Practitioner (NP), Registered Nurse (RN) and Enrolled Nurse (EN). A Nurse Practitioner is a Registered Nurse who has completed a Nursing Council of New Zealand accredited master's degree programme - a structured programme of clinically focused taught courses. A Registered Nurse has completed a 3-year bachelor's degree programme. In addition to this post-graduate study for Registered Nurses encompass various topics, including nurse prescribing, which enables the Nurse to prescribe medications. An Enrolled Nurse has completed an 18-month study programme to attain a New Zealand Diploma of Enrolled Nursing (Nursing Council of New Zealand, 2019b).

In preparation for the literature review, I sought out research articles and reports for Enrolled Nursing. A moderate number of research articles originated from Australia, but only a handful from Aotearoa New Zealand. The New Zealand articles primarily focused on government or Nursing Council of New Zealand (NCNZ) information reports, including statistics and employment. Further articles were from the New Zealand Nurses Organisation (NZNO) magazine publication, *Kai Tiaki*.

Gibson and Heartfield (2005) discussed a long tradition of training and employing Enrolled Nurses in Australia. Their research analysis indicated limited research undertaken about the role of an enrolled nurse in Australia and Aotearoa New Zealand. They suggest that this due to confusion and debate amongst health professions about the role (p. 127). In 2019 there is little change, with confusion and debate continuing about the Enrolled Nurse.

The Enrolled Nurse of 2019 works under the direction and delegation of a registered nurse or Nurse Practitioner, or other health professionals, working with health consumers across the life span. The Enrolled Nurse contributes to nursing assessments, care planning, delivery and evaluation of care, with the Registered Nurse having overall responsibility (Nursing Council of New Zealand, 2019c). The speciality areas of training for Enrolled Nurses are gerontology (the study of ageing), rehabilitation, acute medical or surgical and mental health. The scope of practice details broad areas of responsibility.

As identified in the literature review completed for the Post Graduate Certificate in Transdisciplinary Research and Innovation, (see Appendix V) the Enrolled Nurse within Aotearoa New Zealand's healthcare setting has had multiple name changes, differing scopes of practice and changes in direction and delegation. In 1939 a register was established for Nursing Aids, with a short course of study developed in response to World War II and an outbreak of tuberculosis. The Registered Nurse would focus on caring for acutely ill and injured patients (Prinsloo, 2014, p. 20) and the Nursing Aids helped the Registered Nurses (RN) and provided care for other patients. The new course was 18 months long and was suited for nurses of "lesser abilities" and those students who "could not pass the registered nurse examination" (Lambie, 1951, as cited in Prinsloo, 2014, p. 22). Subsequent changes to the role have included name changes from Nursing Aids to Community Nurse then Enrolled Nurse, and the course of study ranged from 12 to 24 months in length.

The Carpenter Report (Carpenter, 1971) declared that the Community nurse programme was unsatisfactory with many students withdrawing and graduates not accepting employment in hospitals after graduation. A review of the training and preparing of students in the minimum of time was proposed. The Community Nurse name was changed to Enrolled Nurse in the late 1970s to better suit the role of the second-tier nurse. However intakes into the

programme showed a decline of the following years and ‘manpower’ projections indicated few graduates would be required and a more limited role was needed as health services were becoming more complex (Department of Health, 1988, p. 30).

Ultimately the role of the Enrolled Nurse was reviewed, and their hospital-based training was phased out in favour of a cheaper un-trained workforce. The Enrolled Nurse of the 1990s faced demotion or alternative retraining as a Registered Nurse (Hylton, 2005). Redundancies also occurred, and 86 Enrolled Nurses were made redundant from their jobs at Hawkes Bay District Health Board in January 1998 (Meek, 2009).

In addition to the upheaval that occurred, a further name and role change occurred in 2004 when the Enrolled Nurse became a Nursing Assistant and now worked under the direction and delegation of the Registered Nurse. Conversely, in 2008 the New Zealand Government tabled a motion to reinstate the scope of practice and qualification of Enrolled Nurse for 137 nurses in 2008. As stated by the Minister of Health of the time, David Cunliffe, "the issue is one where a group of nurses, through no fault of their own, were caught out by a decision which changed their job title and their scope of practice to something different from what they intended when they signed up for a course of study” (New Zealand Government, 2008, para. 3).

In 2009 Nursing Council of New Zealand agreed to a broader scope of practice and the reintroduction of the Enrolled Nurse name. From 1st July 2010, the Nurse Assistant scope was disestablished, and all second-level nurses became Enrolled Nurses with an expanded scope of practice (Nursing Council of New Zealand, 2018).

The considerable number of changes affecting the Enrolled Nurse over the years has been summarised by one research participant.

> *Here is another story:*
> Nursing Council came out with the New Scope of Nursing, with a deadline, that if you did not complete the New Scope by a certain deadline - then your EN registration would be completely removed. I phoned the Nursing Council to ask where could I go to do "this New

> Scope" only to be told that I would need to ring around and see who would do it for me. X Hospital offered to let me join their RN return to work programme, which they tweaked to fit in my EN New Scope, I had to live in X town for a few months away from my family and at great expense, or I'd lose my Nursing Qualification completely. I don't want to sound like a moaner, but we really have had it rough and with very little support, I feel that all we do is bring up the same stories about how much has changed to our roles, our workplaces, and that we have been a forgotten workforce. This is how it is in X Region anyway, with all our jobs being replaced by HCA's, Support Workers and RN's.

The New Zealand Enrolled Nurse study programme recommenced in 2011 as an 18-month course called the Diploma of Enrolled Nursing. Alignment with the New Zealand Qualification Authority Framework in 2016 has seen the course recognised as the New Zealand Diploma of Enrolled Nursing.

Similarly, Australian Enrolled Nurses also experienced changes to their training and role due to varying policies of individual employers and regional differences (Gibson & Heartfield, 2005, p. 131). Following an extensive review and commissioned report, the Enrolled Nurse role was re-established with an increased scope of practice (Dixon, 2009).

From informal discussions with nursing colleagues in Aotearoa New Zealand, the notion of poor role definition and confusion on the scope of practice were raised. The reasons for this were multi-factorial, and the historical points noted previously would have further impacted on this. Jacob, McKenna and D'Amore (2016) discussed the increasing similarity in the nursing graduate skills and knowledge, combined with limited experience has resulted in "confusion with the nursing workforce about expectations of the ENs" (p. 174).

I was keen to know if this was similar to overseas experience.

Martin (2017) in her international review of the Enrolled Nurse role (also known as Registered Practical Nurses in Canada) highlighted significant similarities with other countries including

- worldwide variances and scope of practice

- rural areas use a higher proportion of ENs/RPAs
- demands for this role increase when there are shortages of nurses
- jurisdictions that eliminated the role have re-introduced it.

The New Zealand Nurses' Organisation Enrolled Nurse Section Strategic Plan 2016-2021 (2016) outlined the need for a more definitive profile for Enrolled Nurses in New Zealand. Areas highlighted in the document include raising the profile of the Enrolled Nurse, opportunities for employment, clarity around the scope of practice, appropriate funding for an Enrolled Nurse entry to practice programme, involvement in Tikanga Māori and integration of bi-cultural practices and contribution to the health workforce.

This strategic plan has since been superseded (New Zealand Nurses Organisation, 2018b) and the strategies updated:

NZNO will:

- Invest in and contribute to the increased understanding of the Enrolled Nurse scope of practice, to nurse leaders and health employers
- Develop a marketing strategy to inform employment and health planning stakeholders on the scope of practice, capacity and capability and the range of services Enrolled Nurses can supply
- Encourage employers to use the support-into-practice framework and orientation programme to support new graduate Enrolled Nurses into the workforce. NZNO welcomes the agreement from Nurse Executives of New Zealand to endorse the framework
- Actively pursue dedicated funding for the support-into- practice framework for Enrolled Nurses.
- NZNO promotes the careful assessment of every nursing vacancy to establish what skill set is appropriate and required and, where possible, consider employment of Enrolled Nurses.

These strategies have also been identified as important by others (Health Central, 2018; Ministry of Health, 2016a; Scott, 2015). Salient questions can be raised therefore, about where does Enrolled Nursing sit within the Aotearoa New

Zealand nursing workforce and what are the plans for the future development of this role?

Currently, the NZNO is surveying its Enrolled Nurse members around the scope of practice, and results will be available early 2020.

2.2.1. Nursing Workforce in Aotearoa New Zealand – the national context

The Nursing Council of New Zealand enlisted Business and Economic Research Limited (BERL) to conduct a review of nursing in Aotearoa New Zealand in 2013. This research is now more than six years old. However, the report identified the projected population needs and the current nursing workforce at the time (Nursing Council of New Zealand, 2013). From the original literature review, the relevant information is as follows: BERL noted of the 45,460 nurses in the country, over 50% of the nursing workforce would be retired by 2035. As of 2010, 90% of the 3130 Enrolled Nurses in New Zealand were over 45 years old (p. 18). Aotearoa New Zealand has an ageing nursing workforce, and a high percentage of older Enrolled Nurses due to the reduction and subsequent cessation of training from the 1990s until 2010. No new Enrolled Nurses entered the workforce during those years. Recent statistics from the Nursing Council indicate that Enrolled Nurses are significantly older than those in other nursing roles, with 77% aged 50 years or over (Nursing Council of New Zealand, 2018).

BERL further projected that to meet nurse to population ratio and the ageing nursing workforce, "an additional 865 RNs and 88 ENs will need to enter the workforce each year between 2010 and 2035" (Nursing Council of New Zealand, 2013, p. 7). The nursing workforce will grow from 45,460 in 2010 to 69,280 nurses in 2035. The predominant place of employment for Enrolled Nurses is within a District Health Board (DHB) setting and residential care. The latter is expected to double by 2035 from 970 to 1810 ENs with increased demand for Enrolled Nurses to work within the DHB setting (Nursing Council of New Zealand, 2013, p. 30).

In a review of the Nursing Council's Annual Reports from 2011 to 2019, the number of new Enrolled Nurse registrations have totalled 1284 (Nursing Council of New Zealand, 2019a).

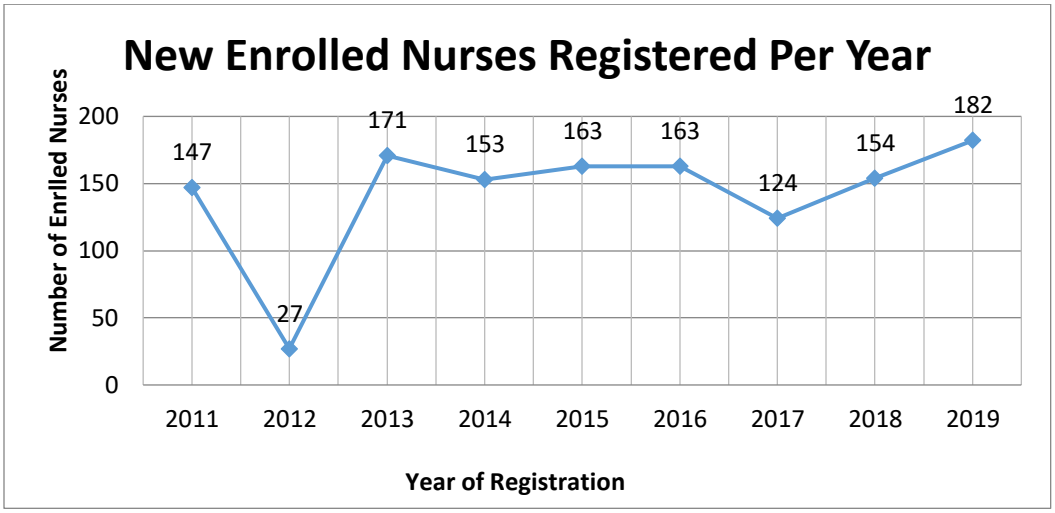


Figure 3: Author's Overview of New Enrolled Nurses Registered per Year

Nurse Assistant programmes were discontinued at the end of 2010 and a transition period for Nurse Assistants and older scope Enrolled Nurses were put in place to change to the new Enrolled Nurse scope of practice. The New Enrolled Nurse training programmes were introduced around this time. The high number of registrations in 2011 may account for the transition in scope for these nurses, with a low number in 2012 entering the workforce with the new scope of practice.

What is of interest is the number of newly registered Enrolled Nurses has been relatively consistent since 2013. However, the total number of Enrolled Nurses has declined steadily from 3152 in 2011 to 2490 in 2019, creating a deficit of 662 Enrolled Nurse despite an additional 1284 nurses newly registered in this time.

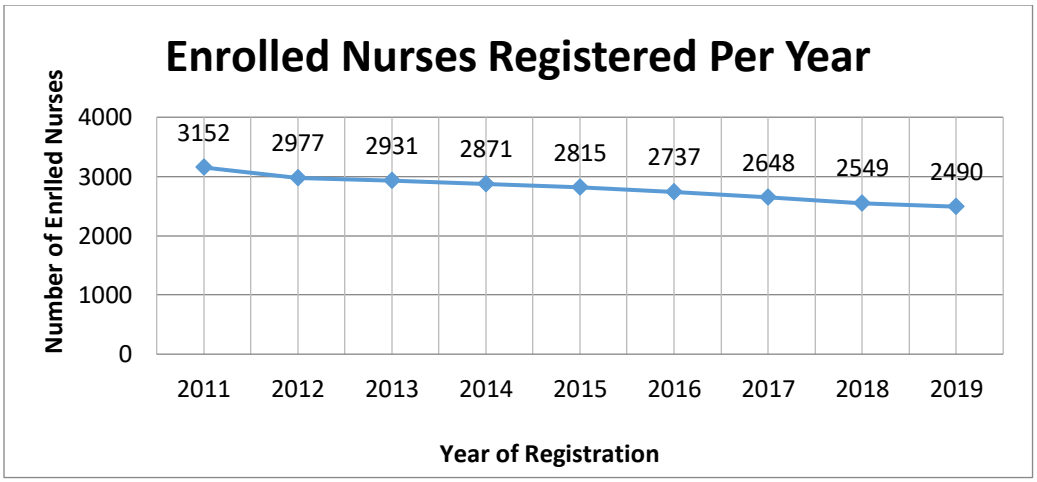


Figure 4: Author's Overview of Enrolled Nurses Registered per Year

In consideration of this decline, factors could well include the ageing workforce and retirement and lack of employment for these new Enrolled Nurses. The researcher considers the idea that the lack of understanding of the Enrolled Nurse role and scope of practice may be a barrier to their integration within the workforce. Further consideration has to be given to the historical upheaval for Enrolled Nursing and if their withdrawal from the workforce had played a part in this. The outcome of enforced changes to nursing, as a consequence of changes for Enrolled Nurses, may have resulted in Registered Nurses expanding their role to include Enrolled Nurse tasks, and non-regulated workforce required to upskill to fulfil Enrolled Nurse roles. If this is the case, it could be surmised that in today's workforce, space must be made for the Enrolled Nurse.

The discussion noted in media articles such as the Nursing Review (2017c) highlighted regional differences in Aotearoa New Zealand for Enrolled Nurses. Canterbury District Health Board was proactive in employing Enrolled Nurses. Conversely, Toi Ohomai (formerly Waiariki Polytechnic) located in the Bay of Plenty has discontinued its EN programme "because clinical placements had been difficult to secure and also because Iwi stakeholders believed the RN scope of practice better suited the needs of local Māori health consumers" (Nursing Review, 2017c, para. 15). The article also identified Northtec (Northland Polytechnic) had noted the same difficulty.

Since this article was produced Northtec are reintroducing the programme commencing March 2020. Currently, seven tertiary institutes are offering the Enrolled Nurse programme.

2.2.2. Enrolled Nursing in the Waikato Tainui Region – the local context

Enrolled Nurse training is available at the Waikato Institute of Technology (Wintec) based at the City Campus in Hamilton, Waikato, New Zealand (Waikato Institute of Technology, 2017). The programme's student numbers were capped to 30 students per year, however, following a Nursing Council of New Zealand (NCNZ) audit, the cap was removed in 2017. Two intakes now occur each year, and there are no limitations on enrolments.

The programme is in its 9th year of delivery at Wintec and demand for the programme is consistent. Pass rates for the State Finals examination are above the national average of 97% and are often 100% for Wintec. State Finals is the Nursing Council of New Zealand exam that all nursing students are required to sit and pass to practice as a nurse. State Finals occur in March, July and November of each year.

Of the Wintec graduates, 15-20% re-enter study into the Registered Nurse Bachelor of Nursing Programme (Nursing Review, 2017). Employment of the previous graduate Enrolled Nurses has not all been within the Waikato Tainui. These graduates have relocated to other areas of the country or took positions requiring long commutes to secure a job. Not all graduates held roles as Enrolled Nurses either. In the last 12 months, July 2018 to July 2019, this has improved for Wintec's Enrolled Nurse graduates with a number securing positions and a noted increase in vacancies for Enrolled Nurses. A robust professional development framework is also in place at the Waikato DHB for Enrolled Nurse progression (Hayward, 2017) and an orientation introduced late 2018 to support Enrolled Nurses into practice.

The Nurse Education in the Tertiary Sector working group (NETS) conducts a Graduate Destination Survey of all nursing graduates post state final examination (Nurse Education in the Tertiary Sector, 2019). The survey indicates a higher number of Registered Nurses are employed in comparison to Enrolled Nurses (86% versus 58%). Further investigation to review this anomaly is required. However, the research findings from this project may provide some reasons. The NETS Survey for Registered Nurses conducted in September 2019 from graduates in July 2019 notes the following:

Registered Nurses	Number of Registered Nurses
Number of Registered Nurse Graduates who passed Nursing Council Exam (throughout NZ)	465
Number of graduates surveyed	411
Number employed as registered nurses	354 - (86% of graduates)
Number seeking work but not offered employment	21 - (5% of graduates)

Number not seeking work as RN	24 - (6% of graduates)
Number of students who did not complete the survey	12 - (3% of graduates

Figure5: Registered Nurses employed from September 2019 to December 2019

The NETS Survey for Enrolled Nurses conducted in September 2019 from graduates in July 2019 notes the following:

Enrolled Nurses	Number of Enrolled Nurses
Number of Enrolled Nurse Graduates who passed Nursing Council Exam (throughout NZ)	104
Number of graduates surveyed	108
Number employed as Enrolled Nurses	63 - (58% of graduates)
Number seeking work but not offered employment	24 - (22% of graduates)
Number not seeking work as EN	16- (15% of graduates)
Number of students who did not complete the survey	5 - (5% of graduates

Figure6: Enrolled Nurses employed from September 2019 to December 2019

From this information, 86% of Registered Nurses were employed at this time compared with 58% of Enrolled Nurses. For the Wintec graduates, 91% of Registered Nurses were employed compared with 29% of Enrolled Nurses. While increased employment has occurred, there is still progress to be made to ensure Enrolled Nurses have opportunities for employment at the same level as Registered Nurses. The new ACE training model will potentially work towards this - The Advanced Choice of Employment (ACE) process supports nurses in their first year of practice (Ministry of Health, 2019b).

Statistics identified by the Nursing Council of New Zealand (Nursing Council of New Zealand, 2018) delineate population distribution of Enrolled Nurses. As of the 2016-2017 period, Waikato had 186 Enrolled Nurses compared with 522 in

Canterbury and 433 in Auckland. Tairawhiti (East Coast of the North Island, New Zealand) employed the least number of Enrolled Nurses with 27.

2.2.3. Māori engagement in nursing – Waikato Tainui

Baker (2009) discussed the development of the Māori nursing and midwifery workforce in Aotearoa New Zealand. Baker described the student's passion and desire to improve Māori health, their influence by role models and whānau inspired Māori and shaped their decision to enter the health sector. Baker's research elaborated on this by stating appropriate supports were required for Māori to consider nursing or midwifery as career options. Participants in her study expressed the need for a "comprehensive range of supports from pre-entry to entry phases of undergraduate programmes" (p. 28). These supports were in the form of early career planning, educational preparation, academic guidance and targeted Māori support to encourage Māori into undergraduate programmes.

In the Waikato Tainui region, this support has been part of the Wintec nursing programmes for over 25 years and is known as the Tihei Mauri Ora stream. It was established in 1990 to provide a culturally safe environment for Māori students (Liddell, Te Apatu, Syminton & McHaffie, 2014). The Tihei Mauri Ora philosophy or kaupapa (ways of being) centres on whanau (family) and Tikanga (traditional ways of knowing) (Liddell et al., 2014, p. 4).

Wintec and Waikato Tainui have recognised the need to encourage and support Māori into nursing and marked the 10th year of support by creating 10 Dame Te Ātairangikaahu Nursing Scholarships to assist Māori. Hera White, Wintec Director Māori, highlights the Māori population in the Waikato at 23% with Waikato Māori nursing numbers at 8%. White states "a further 604 Māori nurses are required to ensure the nursing workforce and Waikato DHB district population demographics are aligned" (Waikato Institute of Technology, 2016, para. 5). The current nursing workforce strongly indicates a poverty of nurses for our population needs.

It is imperative, therefore, for Māori success, that training providers provide a quality wrap-around education for Māori wishing to enter the nursing workforce. In addition to these initiatives, Wintec has introduced a project to enhance the

retention and success of students. I am also involved in this project from my teaching position within the Centre for Health and Social Practice. While this is primarily focused on Māori and Pacific Island students, it will assist all students and is based on embedding additional academic and pastoral support within the classroom setting.

Furthermore, Theunissen (2011) discussed how the nursing workforce has a significant role to play in "relinquishing Māori from health disparities segregating them as a population" (para. 20). Theunissen highlighted the need for incorporating cultural safety, patient advocacy and Māori-centred models of care into nursing education to support Māori and improve health outcomes.

To further support improvement in health for Māori across the Waikato Tainui region, a Memorandum of Understanding (MOU) was established between Waikato District Health Board and the Iwi Māori Council. It will lead the way for radical change in the delivery of health and disability services in the Waikato for Māori (Waikato District Health Board, 2017c). The need for this MOU becomes apparent when reviewing the health statistics for Māori within the area.

2.2.4. Health inequalities in Waikato Tainui

Waikato District Health Board serves a population of over 400,000 people. The Waikato District Health Board area covers 21,000 square kilometres. It stretches from northern Coromandel to close to Mt Ruapehu in the south, and from Raglan on the west coast to Waihi on the east, (Waikato District Health Board, 2017b).

Of particular note statistically is the ethnic mix in the Waikato. Waikato Tainui has a higher population of Māori (23%) and fewer Pacifica people (3%) than the national average - 16% for Māori and 6.5% for Pacifica peoples (Ministry of Health, 2016b).

Additionally, health statistics reveal significant health inequalities for Māori versus non-Māori. The Ministry of Health commissioned *Te Rōpū Rangahau Hauora a Eru Pōmare* to develop a Health Profile for Māori for each District Health Board (DHB) in Aotearoa New Zealand. The report was for planning and funding purposes (Ministry of Health, 2015). While this report is over four years old, it reveals concerning statistics regarding health for Māori and with the focus

on non-communicable diseases/chronic conditions in the Waikato. This information is from the literature review conducted for the Certificate in TDR. See Appendix V.

- Māori adults aged 25 years were 82% more likely than non-Māori to be hospitalised for circulatory system diseases (including heart disease and stroke) in 2011–2013.
- Stroke admission rates were twice as high for Māori as for non-Māori
- Chronic rheumatic heart disease admissions were almost six times as frequent for Māori as for non-Māori,
- Heart valve replacement rates were twice as high.
- 6% of Māori were estimated to have diabetes. Nearly half of Māori aged 25 years and over who had diabetes were regularly receiving metformin or insulin, 84% were having their blood sugar monitored regularly, and almost two-thirds were screened for renal disease.
- During 2011–2013 Māori with diabetes were nearly four times as likely as non-Māori to have a lower limb amputated.
- Compared to non-Māori, cancer incidence was almost 50% higher for Māori females while cancer mortality was close to twice as high.
- The rate of lung cancer was four times the rate for non-Māori, as was the mortality rate. Breast cancer incidence and mortality rates were both two-thirds higher for Māori than for non-Māori.
- Māori aged 45 years and over were 3.8 times more likely as non-Māori to be admitted to hospital for chronic obstructive pulmonary disease (COPD).
- Asthma hospitalisation rates were 2 to 3 times as high for Māori than for non-Māori in each age group.
- Māori were four-fifths more likely as non-Māori to be admitted to hospital for a mental health condition during 2011– 2013. Schizophrenia was the most common condition.
- Leading causes of death for Māori females during 2007–2011 were ischaemic heart disease (IHD), lung cancer, COPD, diabetes, and stroke.
- Leading causes of death for Māori males were IHD, accidents, diabetes, lung cancer, and COPD.

These statistics indicate significant health disparities for our Māori population within the Waikato District Health Board. Furthermore, Waikato has more people in the more deprived sections of the population than the less deprived sections, Ministry of Health (2016) and more than 60% of the population live rurally (Waikato District Health Board, 2018).

2.2.5. Rural inequities

Research is limited to support the claim and the anecdotal evidence suggesting people residing in rural areas have reduced access to health services. The Waikato DHB does acknowledge, however, the issues affecting rural communities being travel time and costs, attracting and retaining staff, fragmented health services and rural communities (Waikato District Health Board, 2017a). As discussed previously, over 60% of the Waikato population live rurally (Waikato District Health Board, 2018).

A report conducted by the National Health Committee, Rural Health Challenges of Distance Opportunities for Innovation, reviewed the status of rural Aotearoa New Zealand, issues, concerns and innovations (National Health Committee, 2010). One outcome discussed is a new model of primary health care with communities having nurse-led clinics, nursing outreach teams, or other ways of intensively using the skills of nurses. Increasing the involvement of nurses in primary health care "can improve the health of the population cost-effectively" (p. 12). On reflection of this recommendation, the Enrolled Nurse role could be considered to support these nurse-led clinics. I was keen to hear from study participants what their thoughts were on where Enrolled Nurses could work.

A strong Enrolled Nursing workforce already exists within rural hospitals of the Waikato District Health Board. Of significance, however, is the high number of these nurses who are retiring over the next few years. It is essential to consider how to replace these nurses within the staffing matrix, particularly as these rural communities are often hard to staff areas.

2.2.6. Health Care Assistant pay increase

A significant issue affecting the health sector is the increase in remuneration for Health Care Assistants (HCA). HCAs are non-regulated carers who support

clients in a variety of settings, but often in residential care facilities. This change in remuneration is impacting on residential care facilities with closures of care homes reported and/or costs passed onto residents (Gee, 2017).

As reported in Health Central (Health Central, 2017a) nurses in the residential aged care sector have lost pay relativity with their unregulated co-workers. Further discussion from Health Central (Health Central, 2017b, para. 15) highlighted the concerns early on about pay gaps between nurses and unregulated care staff “shrink or even disappear”.

Commentary from past-NZNO National Chairperson, Leonie Metcalfe, highlighted the possibility of more enrolled nurse positions being advertised being a positive outcome with "employers seeing that they can get an EN working to the full potential of their regulated scope for around the same cost as an HCA”, (Nursing Review, 2017). The narrowing pay gap is seen “as an opportunity to promote the advantages of employing a regulated, diploma-qualified EN over an unregulated HCA”. On the other hand, Metcalfe suggested that some ENs may prefer to be caregivers as it involved less responsibility and professional development requirements.

I wanted to know from participants what their thoughts were on the impact of this pay increase.

It is pertinent to consider the historical change that occurred for the Enrolled Nurses when their role changed with the introduction of Health Care Assistants in the 1990s. History is on the cusp of repeating itself.

In summary, the 18-month New Zealand Diploma of Enrolled Nurse of today has experienced several changes over the past 80 years since its inception in 1939. These include change of name, length of training and then being phased out and replaced by non-regulated HCAs. The recent pay increase for HCAs has impacted on the Enrolled Nurse within our nursing workforce by pay scale and employment competition. Alongside this is a lack of research and confusion on the scope of practice of an Enrolled Nurse. The future nursing workforce projects a shortage of nurses with an already significant disparity of Māori nurses to Māori population within the Waikato Tainui region. The future health

picture for the Waikato Tainui region is impacted further by health inequalities for Māori and rural isolation and disparity of services.

I was keen to know the current status of Enrolled Nursing within the Waikato Tainui region and the potential for development. I also wanted to further my understanding of the areas of concern raised within the literature reviews and research thus far.

Chapter 3. Research Design

3.1. Methodology and Data Collection Methods

As discussed in the previous section, transdisciplinary research (TDR) methodology involves collaboration, partnership and reflection with various stakeholders focusing on a "wicked problem". Furthermore, the inclusion of stakeholders outside of a research context allows for a more holistic viewpoint. Klein (2008) recognised the importance of having experts from the “problem space” to form an “appropriate interdisciplinary epistemic community” (p. 121) and is this is seen as an essential component of TDR, (Binder et al., 2015;Schauppenlehner-Kloyber & Penker, 2015; Belcher, Rasmussen, Kemshaw & Zornes, 2016; Westberg & Polk, 2016; Smith, 2007; Hospes, Kroeze, Oosterveer, Schouten, & Slingerland, 2017).

One of the main motivations for using the TDR framework for this study was to ensure various voices could be heard.

Various stakeholders (voices) supported this research project, and their input was wide-ranging depending upon stakeholder availability, geographical location and level of ability to participate. Some were able to meet regularly, and others were contacted via telephone or email, or others involved in one-off initial discussions and information-sharing meetings. Stakeholder input included research updates and review of progress, guidance and support with the methodology and survey questions, cultural support, sharing of ideas and world views, collaboration and networking, face to face meetings, information sharing, emails or telephone communication and iteration of the problem and subsequent adjustments of the research discussion and focus.

The stakeholders involved in this project are listed below:

- Centre of Health and Social Practice (CHASP) and Tihei Mauri Ora team members
- Waikato District Health Board and the Professional Development Unit
- New Zealand Nurses Organisation – members of the Enrolled Nurse Section
- Māori Health providers

- Enrolled Nurses
- Registered Nurses
- Nursing Management
- Past Enrolled Nursing students of Wintec
- Aged Residential Care facilities
- Health Providers
- Enrolled Nurse tertiary education providers

Of note is the cultural support received from the Centre for Health and Social Practice Tihei Mauri Ora Nursing team and in particular Jan Liddell. Guidance and advice has been sought throughout the duration of this research. For further information, please review 3.11 Ethical Considerations, page 65.

Group reflections for this project centred upon updates of the research progress and discussion amongst the stakeholder group on the role of the Enrolled Nurse. The discussions initially centred upon the methodology of the project and potential areas of inquiry, processes involved, ethics approval, and updates from members of the group on the topic from their perspective. Many participants have an active role in the development or employment of the Enrolled Nurse, particularly within the Waikato district but also from a national or regional perspective. Other participants were involved with health service delivery, and while may not necessarily work or employ Enrolled Nurses, they could see the potential for the development of this role. Group reflection focussed upon the development of the research project and then later on the findings of the research. Discussions were noted in my portfolio and stakeholders were followed up by email or as part of regular meetings. An email update for stakeholders was disseminated to participants towards the end of the research to discuss the progress and findings.

I found the involvement of the stakeholders to be invaluable for my own understanding of the issues and how the problems affected a variety of people and from different parts of the health sector. The group also guided me on my research journey, offering suggestions and opportunities for reflection with kanohi ki te kanohi/face to face discussions. The group has specialised

knowledge of the wicked problems being addressed. It could now be likened to Communities of Practice as proposed by Lave and Wenger (1991) where people form a group with a common interest in a particular area and share knowledge and experiences.

Iteration was a fluid process and was incorporated throughout the research project and occurred at many stages. This included the development of the "wicked problem", the ethics application process, construction of the survey questions, dissemination of the surveys and project information sharing.

Mutual learning occurred as group participants took part in ongoing discussions and knowledge sharing about the development of the role and the broader socio-political and health workforce influences that impacted on the Enrolled Nurse. Participants were able to share developments, trends and strategies that were in place for the role of the Enrolled Nurse, and also discuss further challenges or opportunities that they had noted as part of their day to day roles. The Qualtrics Survey participants and one to one interviewees were asked regarding challenges and opportunities, and this is recorded in the data analysis for the research, see Chapter 4.

Mutual learning transpired for the participants due to their involvement within the research, information sharing, networking and discussions held during the process. As participants come from a variety of backgrounds, they were able to share their knowledge in their collective groups and learn from each other about developments of the role and how to consider moving forward with potential innovations. Before the research anecdotal stories of the challenges of the role were abound. Now the group had evidence of the difficulties faced by Enrolled Nurses, both present and historical (Gibson & Heartfield, 2005a; Ministry of Health, 2019; Nursing Review, 2017a; Prinsloo, 2014).

Networking with stakeholders was a key component of my research. This occurred either in groups or with individuals and relationships were developed over time. Participants pledged support and ongoing contribution to the project and are keen to be a part of future knowledge sharing, research outcomes and development of the role.

Communication continued throughout the project and included electronic, telephone and face to face approaches. I was available for meetings at the stakeholder's place of work or where convenient for them. Travel took place throughout the wider Waikato Tainui area. This allowed for opportunities to view the workplace setting and to gain a better understanding of the working environment.

It was not possible to gather all stakeholders within one particular setting due to the diversity of geographical location and workload demands. Therefore, discussion and updates tended to be more on an individual or small team basis or incorporated within other meetings.

3.2. Rationale

Transdisciplinary research methodology is ideal for this project due to the complex nature of the topic and the need for a multi-faceted approach.
The use of quantitative and qualitative data collection methods provided a baseline of demographic data and elicited narrative responses. These methods provided a combination of numerical measurements and in-depth exploration of the topic.

3.3. Bracketing

As I am involved in the teaching of Enrolled Nurse students and have seen the positive effects of the Enrolled Nurse on the nursing workforce, it was important to integrate bracketing into the qualitative data collection and subsequent analysis of the research information. It is essential to acknowledge any potential researcher bias (Smith & Noble 2014, p. 101). Debate on bracketing outlines the pros and cons for its use in research. Tufford and Newman (2012) deliberate the inclusion and exclusion of bracketing. They define bracketing as a method used by researchers to reduce the potentially detrimental effects of not acknowledging preconceptions related to the research and thereby to increase the rigour of the project. It is also used to "protect the researcher from the cumulative effects of examining what may be emotionally challenging material" (Tufford & Newman, 2012, p.81). One method of bracketing is to write memos during the research. These memos form the foundation of reflection and analysis

by the researcher. Memos also act as a record of the procedural progress of the research, reflection and cognitive processes involved (Birks, Chapman, & Francis, 2008).

Throughout the research, I kept an electronic portfolio/journaling an e-portfolio software resource known as Mahara (Catalyst IT Limited, 2020). Mahara is a software programme supported by educational institutes for students to maintain a record of their study progress. Students keep online evidence for their future reference and can also share this with others such as tutors, lecturers, mentors or prospective employers. Various documents can be held here, including writing, photos, video and resources (Balaban & Bubas, 2010).

Regular contributions included researcher thoughts, study progress, itemised lists of research milestones and reflections. The portfolio was found to be particularly helpful during the research as it provided an opportunity to verbalise and articulate my thinking, including discussing epiphany 'aha' moments, difficulties, frustrations, and hopes and overall reflection. It was also a medium to plan the direction of the study and to provide an audit trail/ running diary for supervisors to follow progress, provide evidence of learning, involvement in research and related study activities. Furthermore, a hand-written journal with additional 'scribblings' supplemented and supported the more formal portfolio records.

Due to the complex nature of the wicked problem, I used the Integral Theory and the Four Quadrants framework to draw together as many aspects as possible to provide a concise overview of the topic.

The Four Quadrants for this research was based on the works of Esbjörn-Hargens (2009) and extrapolated further using a nursing focus by Dossey (2008).

	Interior		Exterior
Individual	• Personal hopes/goals/dreams of students, success-v-failure in the study programme • Passing State Finals • Second chance learning • Being an Enrolled Nurse • Employment success and worry about not getting a job • If no job then more study • Having to move - no positions in the area • Hope for an increase in finances • Cultural and personal expectations - caring for Whanau, giving back to Iwi • Personal/family stressors • Work-life-study balance		• Employment and getting sufficient hours and role as an EN • Involvement in the nursing community • Shift work adjustment and fatigue • Nurse entry to practice – novice practitioner - the transition from student to nurse, reality of nursing • Relationship with the healthcare team, developing new work behaviours and skills, knowledge of the culture of nursing • Lack of understanding by others of EN role • Competition with other care roles for employment and remuneration
Collective	• World views on Enrolled Nursing • Transferable skills overseas • Nursing culture/ethics in Aotearoa New Zealand • Social determinants of health • Concerns for poor health outcomes for Māori • Concern for rural inequity • Lack of Māori nursing workforce in Waikato Tainui for population needs • Māori nursing success, Wintec retention and success programme for Māori and Pacifica students • National concern on reduced employment opportunities and regional variations • Desire to progress and have educational opportunities • Variable respect and acknowledgement of the role • Historical knowledge and past hurt		• Socio-political - ENs in the political landscape in nursing/workforce groups • Educational and legal implications, challenges and opportunities • Scope of practice confusion • Appropriate teaching and learning for Māori • NZQA educational parameters and requirements, National curriculum • NCNZ direction and requirements • Economic - competition with the non-regulated workforce, staffing matrix, regulated v non-regulated workforce, MECA, workforce planning and strategies • Empirical observations over the years, role overlooked, political football, regional and employment differences • Ageing nursing workforce • Positive mentors available for employers wishing to employ ENs • Bonding scheme extended to ENs • Nurse entry to practice programmes extended to ENs • ACE Programme extended to ENs

Figure 7 Integral Theory and the Four Quadrants framework for the Enrolled Nurse

3.4. Reflexivity

Reflexivity follows bracketing closely and is the acknowledgement of the influence the researcher may have. Berger (2015) identified it as a process of "continual internal dialogue and critical self-evaluation" of the researcher's position within the research. Berger further identified the need to acknowledge and recognise the impact that the researcher may have on the process and outcome (Berger, 2015; Bradbury-Jones, 2007; Guillemin & Gillam, 2004; Stronach, Garratt, Pearce & Piper, 2007).

Berger further discussed strategies to maintain reflexivity such as repeated interviews, prolonged engagement, member checking of data, peer review and support, journaling for self-supervision, and an audit trail of the researcher's reflections (Berger, 2015).

Some of these strategies discussed by Berger were part of the research process and outlined as followed.

- Member checking with key stakeholders and participants allowed for reflexivity and review of my understanding of the research findings. It was also an opportunity to seek clarification of historical and current political changes or strategies such as orientation programmes, employment opportunities and remuneration.

- Peer review of the wider stakeholder group allowed for reiteration of the research focus, progress and updates from members on specific areas of interest for the wider research project. For example, an orientation programme for Enrolled Nurses at Waikato District Health Board commenced during the research project. This orientation is the first specific Enrolled Nurse orientation programme for new Enrolled Nurses in a District Health Board in New Zealand.

- Peer support from stakeholders, colleagues, key participants and from fellow researchers and supervisors within the Community of Practice days for this degree enabled further reflexivity of the research project. All

students and supervisors engaged in transdisciplinary research gather monthly to provide updates, offer support, gain feedback from fellow research colleagues/students and supervisors. Reflections and updates on our progress were an integral component of the course of study. Peers and supervisors were able to pose questions, seek clarity and provide thoughtful commentary to assist all students. This was particularly helpful in guiding and encouraging academic development and rigour. I found this process to be a time for reflection and thoughtful analysis and allowed opportunities for reconsideration of personal viewpoints with many 'eureka effect' moments noted.

- Triangulation of data (see 2.7); varied data collection methods were utilised to elicit responses from a variety of participants in different areas throughout Aotearoa New Zealand.

- Journaling in the Mahara e-portfolio platform and a hand-written journal (see 3.3). This medium supported my review of the research, recorded progress and allowed opportunities for reflexivity and critical analysis.

By using bracketing and reflexivity as a regular part of the research process, the potential effect of personal researcher bias was mitigated.

3.5. Grounded theory – Qualitative Research

Qualitative research involves the use of narrative responses from research participants. It is a collection of comments, stories, thoughts and feelings with the emphasis on words. Mason (2018) discusses various qualitative research approaches, including an understanding of the experience, sensitivity to social context and analysis that takes into account the complexity, context and detail of the topic. Mason offers a practical guide to follow.

Astalin (2013) proposes that qualitative research is an umbrella term for a broad range of approaches and identifies four conventional approaches: Grounded Theory, Ethnography, Phenomenology and Case Study. For this study, I focussed on Grounded Theory. According to Astalin Grounded Theory allows

theory/theories to develop from the data that is collected. It is a systematic process where data is collected, coded, connections made, and a theory generated. Data transcription and its subsequent review culminate in the emergence of ideas for the researcher during the process. A new theory is generated from these themes and is taken directly from what the research participants have articulated, and subsequent connections made by the researcher. Grounded theory is a methodological approach as well as an outcome. This concept is supported by de Chesnay (2015, p.1).

For this study, Grounded Theory was the method used for reviewing the data collected by the qualitative research component. It was a method to analyse and code the data and identify themes. From these themes, ideas were then generated. Furthermore, a guided approach was adopted using the Systematic Text Condensation method (as described below) to help process and order the data.

3.6. Systematic text condensation

Systematic text condensation (STC) (Malterud, 2012) is based on Giorgi's psychological phenomenological analysis to investigate a phenomenon using reduction (Giorgi, 1985) Giorgi originally developed a four-step procedure for reviewing data, and this was further modified into a five-step process, (Giorgi, Giorgi & Morley, 2017)

Review the entire script to develop an overall sense of the described situation

1. Objects that emerge are phenomenon experienced by the participant
2. The script is further reviewed, and components are broken down further into meaning units
3. The researcher considers the psychological insight into the interpretation of the meaning units
4. The researcher then transforms this into a statement of the subject's experiences.

Malterud has developed this further as follows (Malterud, 2012).

The first phase for STC involves reading the transcripts, narratives, comments and data collected using the qualitative research approach to get a general

impression and to look for "preliminary themes" (Malterud, 2012, p. 796). Malterud states how important it is to review this data with an open mind and an awareness of the participants' voices and to use bracketing to remain impartial. From this overview, preliminary themes are established and used as a basis for further development.

The second phase involves the exploration of the themes and identifying meaning units. A meaning unit is a text fragment containing some information about the research question (Malterud, 2012, p. 797).

Codes are then identified and classified by sorting meaning units and marking them with a code in the third phase (Malterud, 2012). This coding can often connect meaning units. Malterud emphasises the need to be flexible in the coding stage to help the researcher to gain a better understanding of the topic. The coded information is then sorted into sub-groups, and STC takes each of these coded groups as standalone analytical units for further analysis. STC analysis considers each meaning unit within the coded sub-group. It is then further reduced into what Malterud describes as a condensate "an artificial quotation maintaining as much as possible the original terminology applied by the research participants" (p. 799).

Finally, condensates and quotations from each coded sub-group are developed into a meaningful narrative about the phenomenon. This story is grounded in empirical data but is presented as analytical writing presenting the most salient content and meaning (Malterud, 2012, p. 800). Grounded theory and STC follow a distinct process of reviewing data, analysing this into meaning units and then formulating this information into a statement of the participant's experience.

Malterud (2012) provides extensive guidance and advice, especially for the novice researcher. She emphasises the need for a step by step analysis. This stepwise analysis ensures the researcher does not lose touch with the empirical data and provides the researcher with an increased and concentrated focus.

3.7. Quantitative and Qualitative Research

Quantitative research is a method of research that explains phenomena according to numerical data. This data is analysed by mathematical means and uses methods such as statistics. It can also be defined as empirical research of social phenomenon or human problems, involving testing a theory using statistics to measure numbers and variables involved (Yilmaz, 2013).

Methods of quantitative research involve the use of pre-constructed or pre-determined response categories where participant's perspectives and experiences are entered. The advantage of this method allows the researcher to review and measure the responses from participants to a limited number of questions. The researcher can then compare the responses and summarise statistically (Yilmaz, 2013, p. 313).

Quantitative research uses surveys, forms, questionnaires and measurements involvement numbers. In contrast to quantitative methodology, qualitative research uses "participant's observation, in-depth interviews, document analysis, and focus groups" (Yilmaz, 2013, p. 315).

3.8. Data Collection Methods

This research utilised a mixed-method approach involving qualitative and quantitative research methods. Data collection included one on one semi-structured interviews with participants, informational meetings with interested parties, an anonymous Qualtrics online electronic survey and stakeholder discussions.

Quantitative data such as questions on demographics, length of time nursing, region of nursing and employment status providing foundational information was collected via the online survey. Qualitative questions provided opportunities for participants to add their comments resulting in significant qualitative data collection. The research has a robust narrative discourse as a result of the triangulation of data collection methods. It has produced contextual real-world knowledge about shared beliefs of the Enrolled Nursing role.

Dissemination of information about the research through third parties such as online surveys and advertising in generic publications and the Waikato District Health Board website allowed for anonymous participation in the electronic survey or the choice of contacting the researcher directly. There was no obligation on behalf of the participant to be involved unless they chose to do so themselves.

As a researcher, nurse, and academic staff member, I am conscious of personal cognitive bias. The anonymous survey was the best approach to gain information without influencing individual responses. Semi-structured interviews provided an opportunity for participants to connect and discuss their viewpoints with me directly. This is extrapolated further in the ethics section (see 2.9).

Triangulation of data was essential to gain a variety of responses, from a variety of individuals from different regions. Flick (2004) discussed the triangulation of data and combining data drawn from "different sources and at different times, in different places or from different people" (p. 178).

Polit and Beck (2017) identify four forms of triangulation of data, two of which have been used within this research: method triangulation, involving the use of different methods to collect data and data source triangulation, involving various participants in the research project.

This triangulation of data allowed for a comprehensive overview from diverse sources rather than a single and potentially biased group or viewpoint. This study was promoted regionally and nationally, allowing participation from interested parties, at their own volition, to discuss their personal experience and opinions. The data collection methods ensured that information gathered was from either an anonymous perspective or as a result of a one on one semi-structured interview with myself the researcher. Results of the semi-structured interviews are included in the overall quantitative statistics and within the qualitative comments. These interviewees are not identified in this thesis.

Further to this, two streams of research participation were conducted simultaneously throughout the timeframe.

Stream A involved collaboration and ongoing consultation with specific stakeholders. Membership for Stream A involved those stakeholders previously mentioned (see 2.0). Discussion included defining the “wicked problem”, or the real-world issues, research and methodology, participation and involvement with the research, progress updates and group reflection on research development and findings. Sharing of information was a key component for this group.

Stream A membership also included a wider group of stakeholders. These stakeholders were identified as service providers and approached individually by myself to discuss the research, focusing on the transdisciplinary approach and involving several key personnel to look at a ‘wicked’ problem’ that affects multiple parties. Dialogue with these groups was multi-faceted and included service provision, current staffing matrix, and support of Enrolled Nurses, and the role of Enrolled Nurses within the organisation. Stakeholders also discussed the potential for service expansion and the potential for further development of the Enrolled Nurse role.

A limitation with this approach of stakeholder involvement was my knowledge of stakeholders. Exclusion of any specific organisation or person is unintentional. The stakeholders approached are key health providers within the Waikato Tainui region and many are partners with Wintec. All 42 residential care facilities within the region were contacted via email, and two responses were received, one decline and one agreed to further information and discussion. Requests were also made to five Māori Health Providers with three responses and follow up discussions held.

The Qualtrics survey was disseminated via national publications and the Waikato DHB website, allowing people to contact me independently.

The discussions with the stakeholder members were an important component of the transdisciplinary process. Working relationships were established between myself and stakeholders. These relationships supported opportunities to appreciate diverse worldviews and viewpoints of the “wicked problem”. Several positive impacts of this process were observed. These included network building, establishing relationships and building rapport and trust, understanding of individual and group world views, and knowledge generation and sharing.

While a transdisciplinary project may take several years for results (Thompson et al., 2017), this timeframe is not available within this research project. However, collaboration and teamwork have provided a solid foundation for working together on potential innovations for the research outcomes to enhance the role of the Enrolled Nurse. This is discussed further in Chapter Seven.

Stream B centred upon canvassing health professionals, specifically Enrolled Nurses within the Waikato region for their thoughts on the role of the Enrolled Nurse. Advertising of the research was through various mediums, including the following:

- Advertorial in the Kai Tiaki magazine, a monthly mail-out and online publication distributed by the New Zealand Nurses Organisation (NZNO)
- Information on the Waikato District Health Board intranet
- Information in the Pulse magazine – an NZNO electronic newsletter
- Information put onto the NZNO EN Section Facebook page
- Discussion at Enrolled Nurse Section National Conference
- Dissemination of research information to interest groups
- Residential care facilities
- Health professionals
- Service providers
- Waikato District Health Board personnel
- NZNO Sections – nursing interest groups within the New Zealand Nurses Organisation
- Providers of Enrolled Nursing tertiary education

While the initial geographical focus was Waikato Tainui, due to the broader national distribution via national networks, responses included participants from other regions throughout Aotearoa New Zealand.

3.9. Qualtrics Survey and Interview Questions

I developed the participant questionnaire and semi-structured interview questions. Ten reviewers piloted these questions within the Centre for Health and Social Practice, all of whom are registered nurses who hold senior academic roles within Wintec. All reviewers have extensive experience within education, clinical settings and research.

The reviewers considered language, readability and relevance of the questions. They provided feedback on using the Qualtrics platform and best practice for the order and flow of the questions. From this review, questions were then modified, and the order of the questions changed - the main questions first followed by demographics. These questions formed the basis for the semi-structured interviews conducted. Using the same questions provided consistency while using different mediums for data collection and allowed for further reflection by the participants.

The importance of this process as suggested by Majid, Othman, Mohamad, Lim and Yusof (2017) was to test the questions, gain practice in interviewing and allow for modifications and improvements to the questions during the development.

Questions were designed to elicit numerical data and narrative responses from the participants. A section of questions centred upon collecting foundational demographic data such as where respondents lived, age, occupational background and employment. The main questions were designed to gather information on concerns noted thus far in the study: understanding of the status and scope of practice of Enrolled Nursing with the Aotearoa New Zealand health workforce, employment opportunities, challenges and opportunities for the Enrolled Nurse and the impact of the Health Care Assistant pay equity claim.

Twenty-two questions were finalised for the anonymous online Qualtrics survey: 7 questions sought definitive quantitative data while the other 15 a combination of quantitative questions with options for comment, or definitive qualitative questions. The quantitative questions utilised a structured Likert scale. This scale provided a set of options for participants to grade their opinion on specific

issues. The Likert scale allows for independence for a participant to choose any response in a “balanced and symmetric way in either directions” as noted by (Joshi, Kale, Chandel & Pai, 2015).

See Appendix I for the survey questions.

The Qualtrics survey was mobile phone and computer-friendly, and the estimated time for completion was approximately 8-10 minutes. The access to the Qualtrics survey was by an anonymous link. The Qualtrics survey was launched on 26th March 2019 and closed 30th June 2019.

Consent to participate in the Qualtrics online survey was the initial question, with the participant having the choice to continue and complete the survey. Participants who wished to participate in the individual semi-structured interviews contacted me. Participants reviewed the information material and signed the participant consent form. The interviews were either face to face or via a telephone discussion.

The total number of Qualtrics online survey participants were 108. In addition to these, 12 one on one semi-structured interviews were conducted using the Qualtrics survey questions as a guide. These participants contacted the researcher to participate in an interview. Interviews were typically 30-40 minutes in duration and recorded with permission using a Sony sound recorder. These were transcribed using Otter or Speechnotes software and then individually reviewed by myself for accuracy. These were further member checked by the participants of the one to one interviews.

3.10. Ethics Statement

Prior to the research commencing, approval from the Wintec Human Ethics in Research Group, and approval from Ethics Committee Waikato District Health Board was obtained.
The original application and letter of approval are filed with the relevant offices at Wintec. Please see Appendices II and III.

3.11. Ethical Considerations

Awareness of potential areas for researcher bias is important to consider when establishing and conducting research. Smith and Noble (2014) outlined three reasons why it is essential to understand research bias (p. 100):

1. Bias exists in all research, across research designs and is difficult to eliminate
2. Bias can occur at each stage of the research process
3. Bias impacts on the validity and reliability of study findings and misinterpretation of data can have significant consequences for practice.

Smith and Noble (2014) outlined five different areas where researcher bias can occur. These are design, selection/participants, data collection and measurement, analysis and publication, (p. 101).

The application was filed by myself. It was identified within the application that I am a staff member of the Centre for Health and Social Practice and currently undertaking the Master of Transdisciplinary Research programme, now known as Master of Applied Innovation. Supervisors were also identified and reviewed the application before its submission.

The project summary stated the researcher's focus for this transdisciplinary research project was to review the role of the Enrolled Nurse, specifically within the Waikato region, and in collaboration with key stakeholders. The method of data collection was identified and involved mixed-method including semi-structured interviews, focus groups/hui, mail out and web-based questionnaires. The methodology to be used was Transdisciplinary, and a brief explanation was discussed.

Groups anticipated to participate in the project were acknowledged and included Enrolled Nurses, Registered nurses, Past Enrolled Nurse graduates from Wintec, health providers, Māori and Pacifica health providers, Wintec staff, and regulatory and support organisations. Participants to be excluded were current Wintec students.

Consent was to be gained by research participants in the Qualtrics survey and one on one semi-structured interviews. The Qualtrics survey's first question was a consent question. One-on-one interviewees reviewed and signed a consent form. See Appendix VI.

Consideration of the potential for employee's vulnerability and industry partners concern regarding commercial sensitivity was included within the Ethics Application. Confidentiality is, therefore, paramount for all participants, and I have endeavoured to ensure that participants are not identified through the data reported. Discussion with stakeholders has occurred, and their agreement sought to include their details.

All written material (questionnaires and interview notes, for example) stored on a recordable medium was kept in an electronic file, password protected and stored in a locked cabinet at Wintec or the researcher's home. Access to all written material (questionnaires and interview notes for example) whether in a manual file or a password protected electronic file, was restricted to the researcher/s only and raw data only shared with supervisors.

Cultural advice and support by Wintec's Tihei Mauri Ora nursing and Kaiawhina colleagues provided dialogue and guidance for Māori nursing students and issues faced by Māori within the Waikato Tainui region. I met regularly with Jan Liddell, Tihei Mauri Ora nursing support for the Enrolled Nurse programme. Jan offered cultural guidance and advice and clarified Te Ao Māori world view. The Wintec Kaumatua supported the research by providing suggestions on Māori health providers within the Waikato Tainui region.

Chapter 4. Data Analysis

4.1. Introduction

As discussed in the previous chapter, the collection of data was predominantly via a Qualtrics online survey with a further 12 one on one semi-structured interviews conducted using the Qualtrics survey questions as a guide. Systematic Text Condensation (STC) (Malterud, 2012) as outlined in Chapter 2, p. 56, was used to analyse the narrative data obtained in the online survey and interviews. STC is based on Giorgi's psychological phenomenological analysis and investigates phenomenon using reduction(Giorgi, 1985).

The first phase for STC involves reading the transcripts, narratives, comments and data collected using the qualitative research approach to get a general impression and to look for "preliminary themes" (p. 796). The second phase involves the exploration of the themes and identifying meaning units. A meaning unit is a text fragment containing some information about the research question (Malterud, 2012, p. 797). Codes are then identified and classified by sorting meaning units and marking them with a code in the third phase (Malterud, 2012). It is then reduced further to a condensate which is "an artificial quotation maintaining as much as possible the original terminology applied by the research participants" (p. 799). Finally, these condensates and quotations from each coded sub-group are developed into a meaningful narrative of the phenomenon.

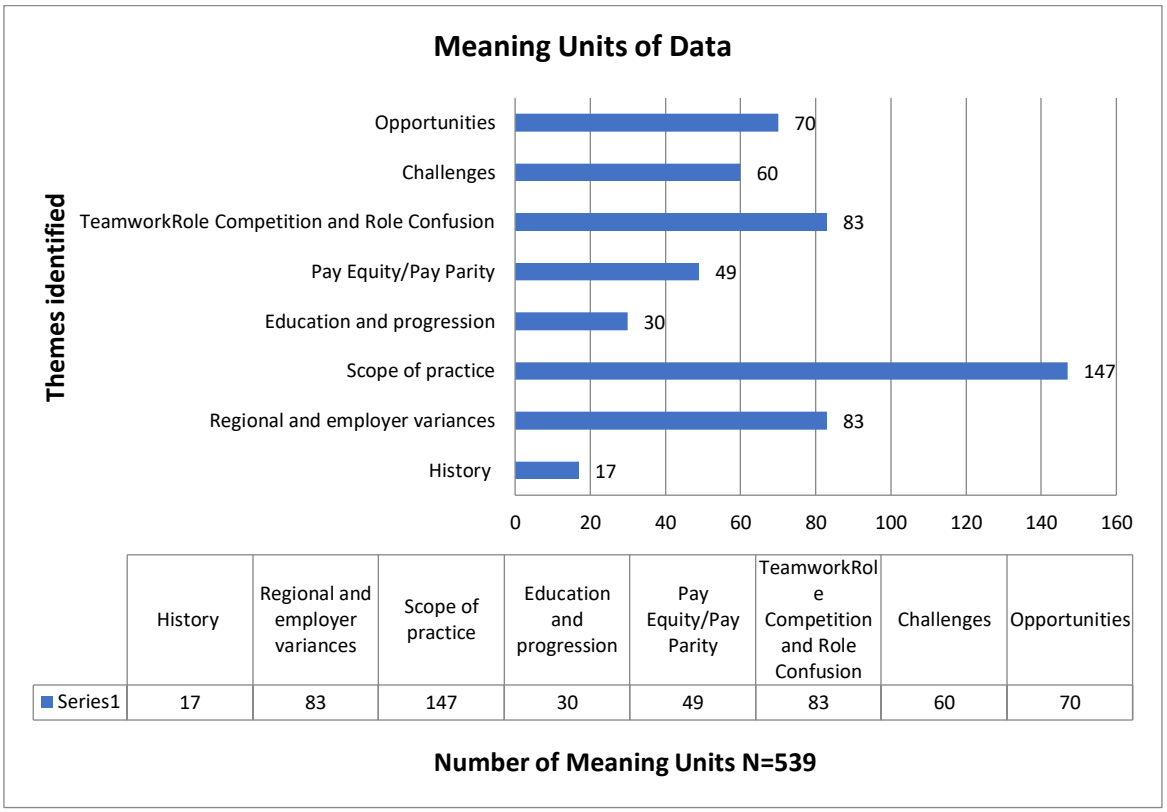
STC guided the review of the narratives, transcripts and comments collected using the qualitative research approach. A general impression was gained, and themes identified. Emerging themes were as follows:

1. Historical hurt
2. Confusion about the Enrolled Nurse Scope of Practice
3. Employment differences
4. Competition with other roles and teamwork
5. Pay equity settlement and disparity
6. Education and progression – want -v- ability, challenges and opportunities
7. Support needed for the role

The second phase involved the exploration of themes and the identification of meaning units. A meaning unit is a text fragment containing some information about the research question (Malterud, 2012, p. 797).

The numbers of meaning units identified from the data were 539. (See graph below.)

Meaning units were then classified and coded in the third phase of STC. The coding process allowed for further thought and a greater understanding of each fragment of text. Several meaning units were able to be connected.



Graph 1: Meaning units of data

These codes were then sorted into sub-groups, forming stand-alone analytical units for further analysis and reduction to a condensate.

As discussed by Malterud, this is "an artificial quotation maintaining as much as possible the original terminology applied by the research participants" (Malterud, 2012, p. 799).

The seven sub-groups identified were:

1. Historical hurt and devaluing of the Enrolled Nurse Role
2. Confusion about the Enrolled Nurse Scope of Practice
3. Employment – regional and employer differences
4. Competition with other roles
5. Pay Parity/Disparity
6. Progression, education,
7. Support needed for the role, challenges and opportunities

Finally, the condensates and quotations from each coded sub-group provided the basis for a meaningful narrative about the phenomenon.

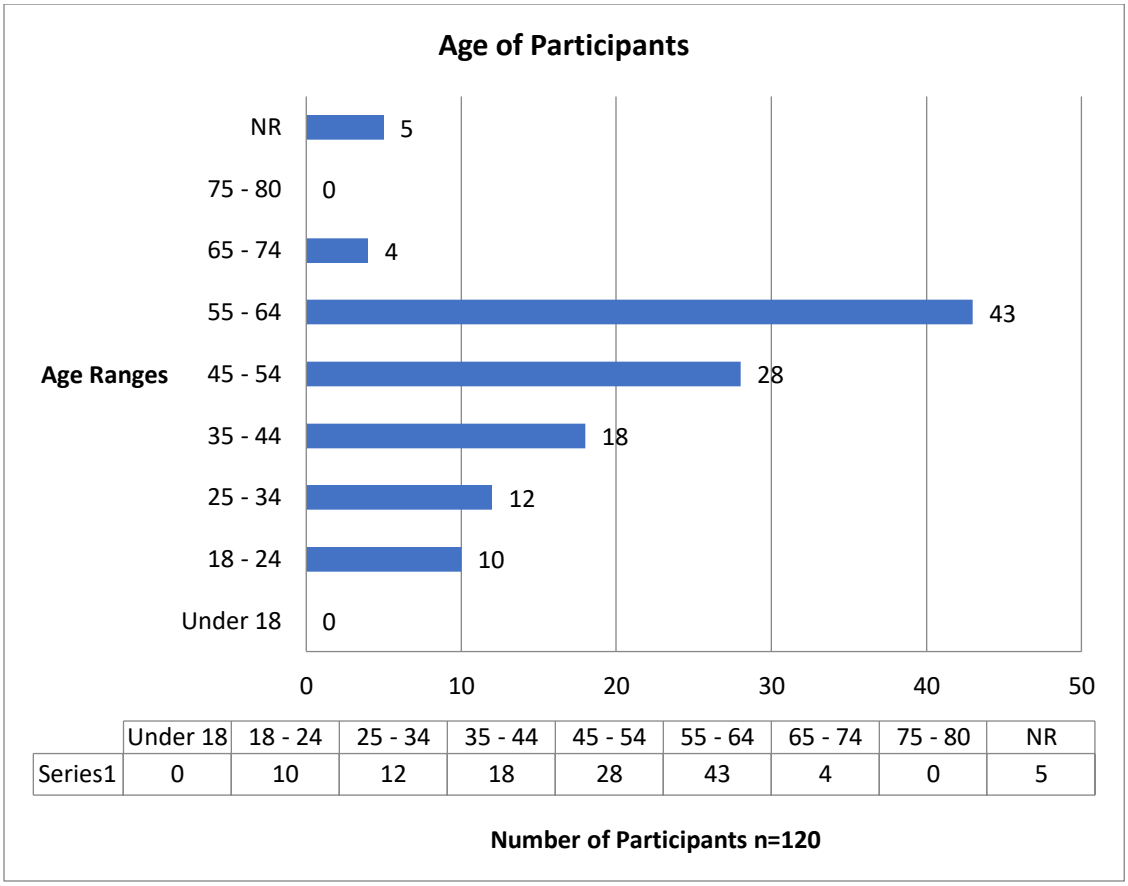
The following section reviews the information gathered in the research. Of particular note are the narratives from respondents that are a vital part of the research. It is important to honour these narratives to ensure the voices of respondents are heard, rather than an interpretation and translation by others.

On reflection, I have asked myself if this has occurred historically, and if this is the reason why these issues persist today.

Further narratives are available for review in Appendix IV

4.2. Demographics of survey

4.2.1. Age Range of Participants



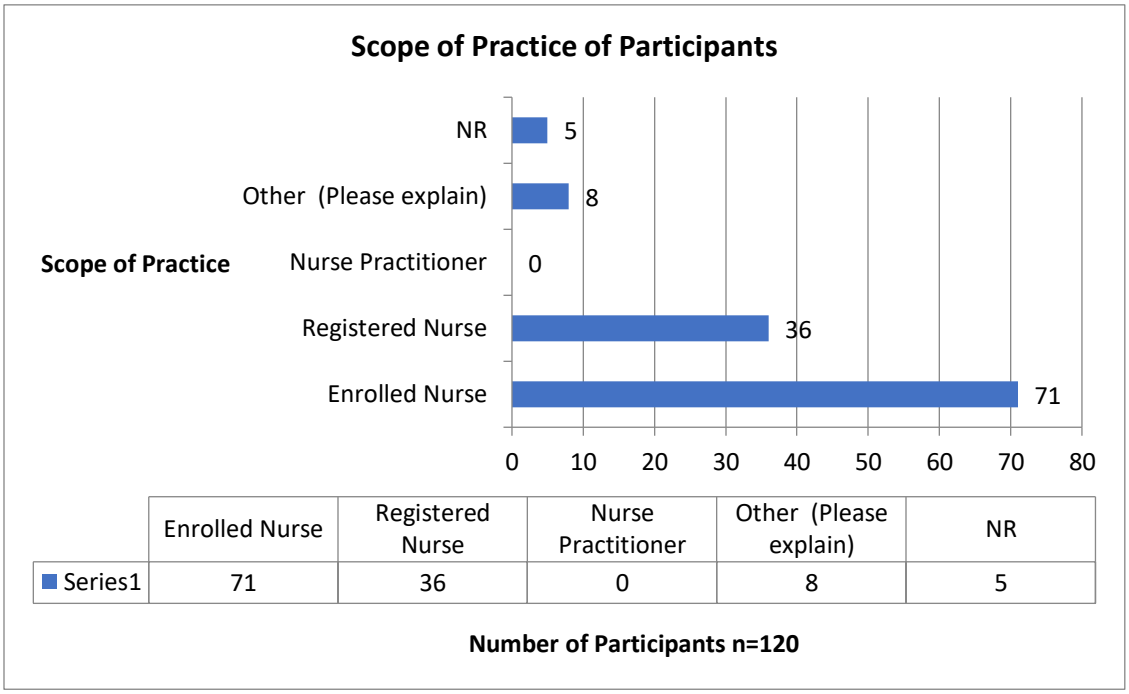
Graph 2: Age range of participants

The highest age range of respondents were the 55 - 64 group (35.8%), next was 45 - 54 (23.3%), followed by 35 - 44 (15%), 25 - 34 (10%) and 18 - 24 (8%). The 65 - 74 age range is 3%. Of note are the majority of respondents who identified in the 45 – 64 age ranges (62.1%). This high percentage may also reflect the issue of an aging nursing workforce.

The Nursing Council of New Zealand (2018) have further identified that 77% of enrolled nurses are over 50 years of age, making this group significantly older than other nursing roles in Aotearoa New Zealand. Enrolled Nursing training had ceased for several years and recommenced ten years ago. This is likely to account for reduced numbers in the younger Enrolled Nurse population in comparison to the older age brackets.

Not all respondents were Enrolled Nurses at the time of completing the survey. This is expanded on in the next data set. The number of overall participants n=120. NR = no response to the question recorded.

4.2.2. Scope of Practice of Participants



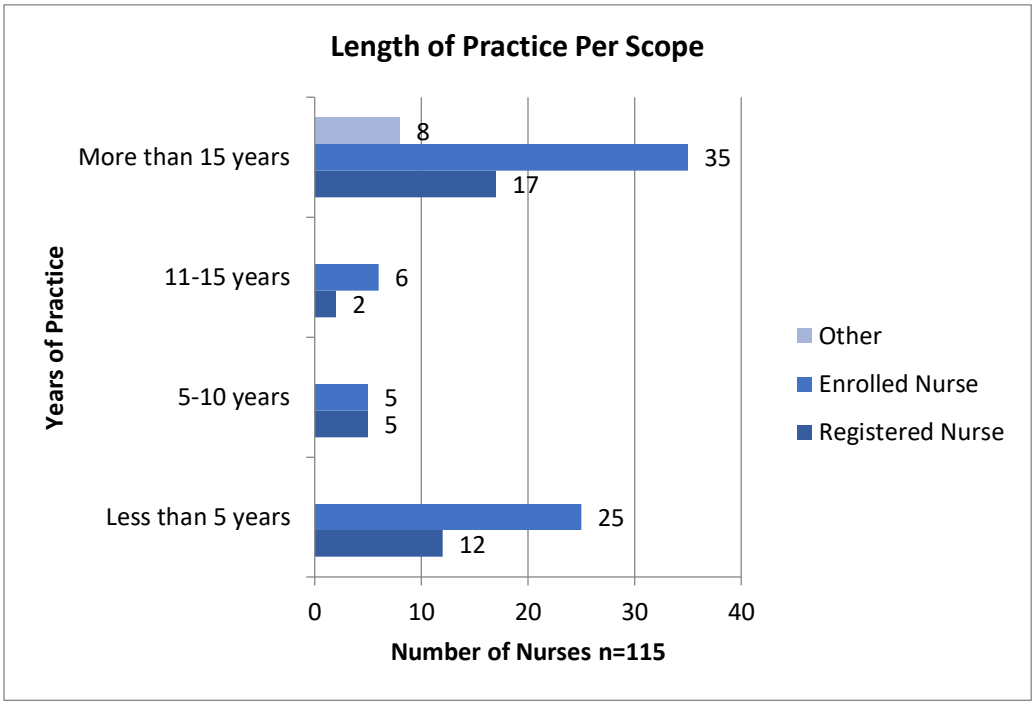
Graph 3: Scope of practice of participants

Of the 115 participants who responded to this question, 61.7% were Enrolled Nurses, 31.1% were Registered Nurses, and 6.9% identified other areas of work. The high number of Enrolled Nurse participation may be due to the level of interest from this group and dissemination through Enrolled Nurse channels and media. The information for the online survey was available through the Waikato DHB staff website and NZNO monthly magazine for other nursing scopes and health professionals.

Other areas of work were identified rather than a specific scope of practice. These included management, a Registered Nurse who was an Enrolled Nurse before registration, a Practice Nurse, an internationally qualified Enrolled Nurse, Educators, and a nurse from the Operating Theatre. No health professionals outside of nursing participated in the survey.

Of the total respondents for this question, a significant number were Registered Nurses and ‘Others”, 38.2%, indicating a broader interest in the Enrolled Nurse role from other nursing professionals including managers and educators.

4.2.3. Length of Time Practising as a Nurse



Graph 4: Length of time practising as a nurse

Of the 115 participants who responded to this question a significant number, 52.1%, had more than 15 years experience, with 30.4% being Enrolled Nurses. It could be surmised that this corresponds to the over 45 age group. However, the 15 plus years experience cannot be analysed further to be sure. The Nursing Council of New Zealand utilises these age ranges for nurses applying for an Annual Practicing Certificate.

A considerable decrease to the next category was 6.9% with11-15 years of experience. This may account for the time when Enrolled Nurses were not trained, and then 8.6% with 5-10 years of experience. This increase may be due to the re-commencement of the Enrolled Nurse training.

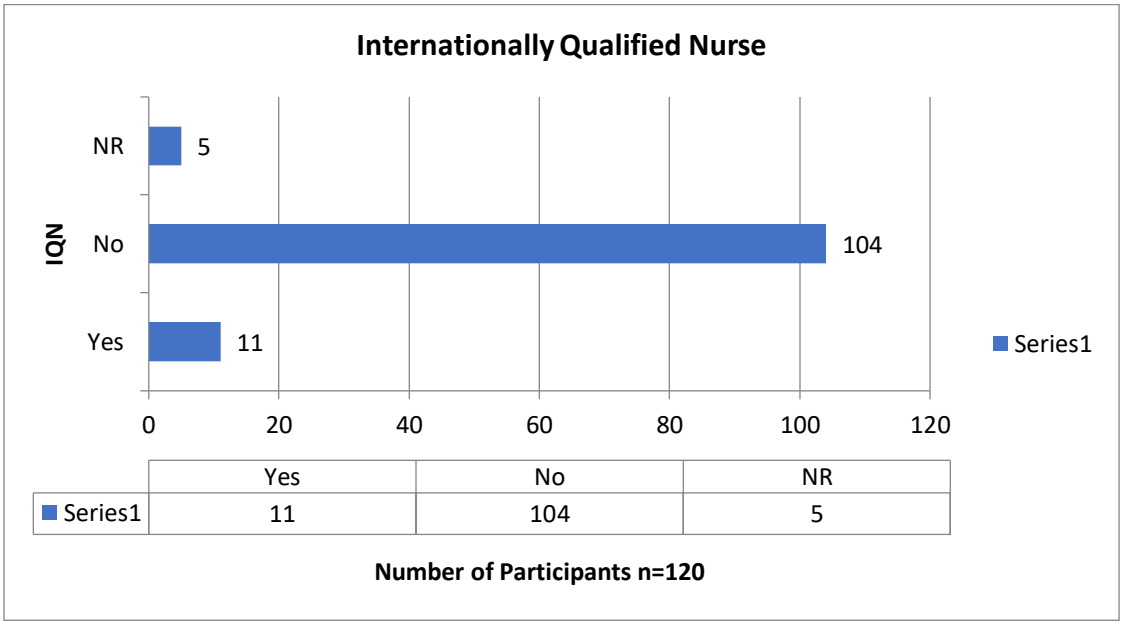
Nurses with less than five years experience totalled 32.1%, with 21.7% of these being Enrolled Nurses. In the year 2019, 182 Enrolled Nurses were added to the Nursing Registrar of New Zealand. The numbers for preceding years have

been discussed on p. 40 and 41. In the previous five years, from 2015 to 2019, 816 new Enrolled Nurses have entered the workforce.

These figures also correspond to the number of participants within the survey:

- 61.7% were Enrolled Nurses
- 31.1% were Registered Nurses
- 6.9% identified other areas of work

4.2.4. Internationally Qualified Nurse

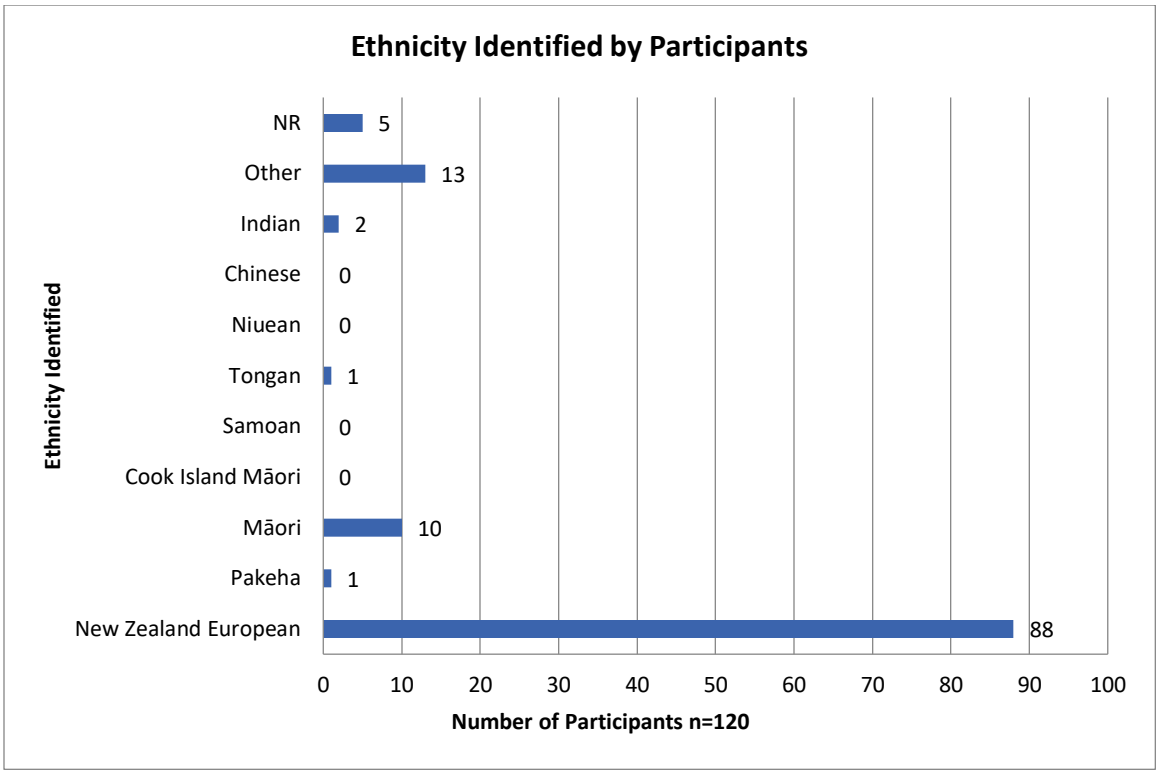


Graph 5: Internationally Qualified Nurses

Of the 115 participants who responded to this question, it is noted 90.4% were not internationally qualified nurses (i.e. trained in New Zealand), and 9.5% identify as internationally qualified nurses. A small number, 4.1% did not respond to this question.

By definition of the statistics above, New Zealand trained nurses should have had exposure to Enrolled Nurses and the history of this workforce within the Aotearoa New Zealand health setting. One could presume, therefore, a good understanding of the scope and roles undertaken by Enrolled Nurses. Section 3.2.4 discusses this further identifying participant understanding and perception of other health professional's knowledge.

4.2.5. Primary Ethnicity



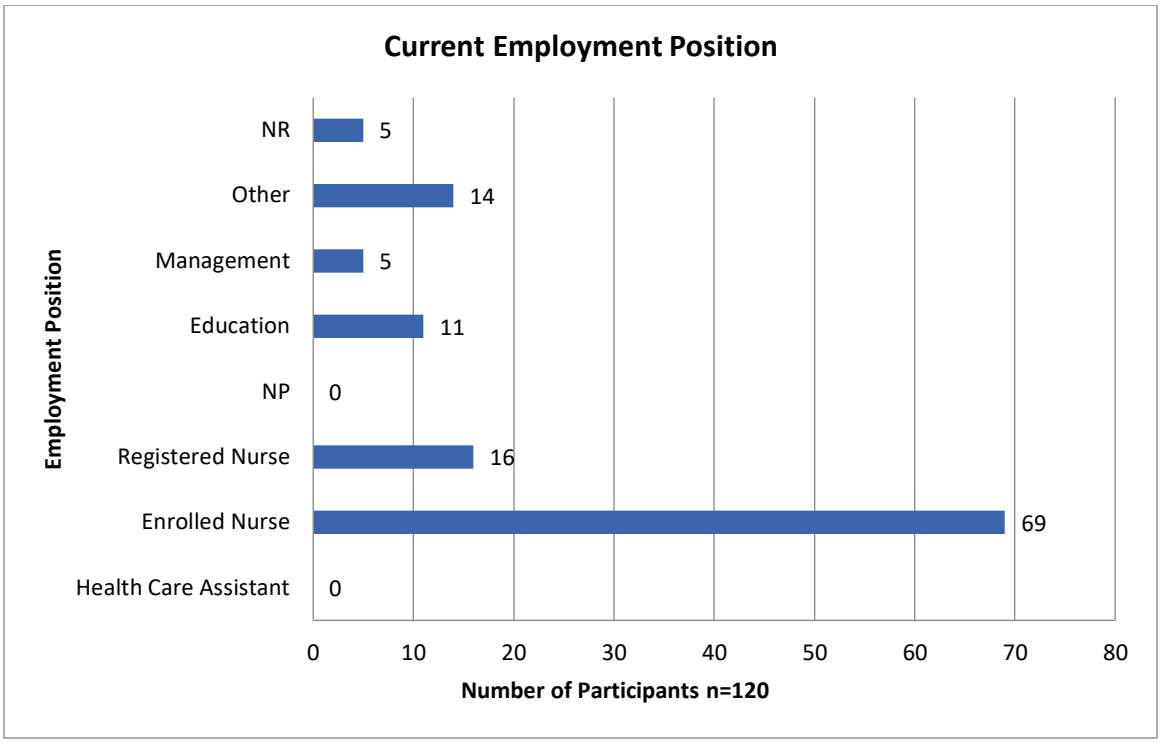
Graph 6: Primary ethnicity

Of the 115 responses to this question, 76.5% identified as New Zealand European. A further 8.6% identified as Māori, which is similar to the Waikato Tainui average for Māori nurses. As highlighted earlier, the population of Waikato Tainui Māori is 23%, and there is a significant deficit of Māori nurses to population needs, see Section 2.2.3.

Of the 13 ethnicities identified as 'other' ethnicity details are as follows:

- 5 x British
- 2 x Filipino,
- 1 x Scottish
- 1 x New Zealander
- 1 x New Zealand European and NZ Māori Ngati Kahu
- 1 x English
- 1 x Australian
- 1x Australian European

4.2.6. Current employment position



Graph 7: Current employment position

Of the respondents, 60% identified their current employment position as an Enrolled Nurse. Of the Registered Nurses respondents, 14% identified their position as a Registered Nurse and less than 10% in Education. Other areas were identified, although it is important to note that these could further be defined into their original scope of practice. Those with an * could well be an RN or EN.

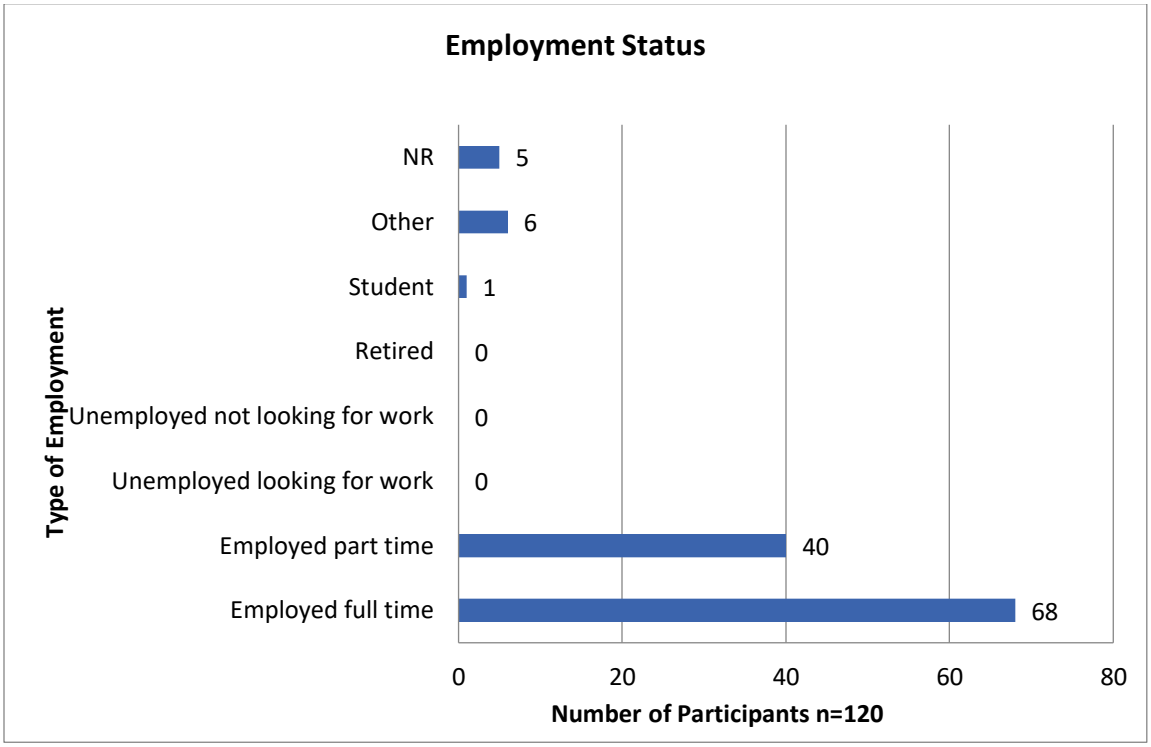
Other employment positions identified as follows:

- Cardiology clinical trials *RN
- Clinical Nurse Specialist *RN
- Clinical Nurse Coordinator *RN
- Retired
- Kaiwhakahaere Population Screening and HCA on the weekend *EN
- Practice Nurse *RN/EN
- Clinical Support Worker*EN
- Nurse Educator *RN
- Nurse Advisor *RN

- On leave travelling the country
- Operating Theatre *RN/EN

This information shows a diverse range of scope of practice and roles for the participants. It provides a broader perspective for the research with opinions from a wealth of different employment areas.

4.2.7. Current Employment Status



Graph 8: Current employment status

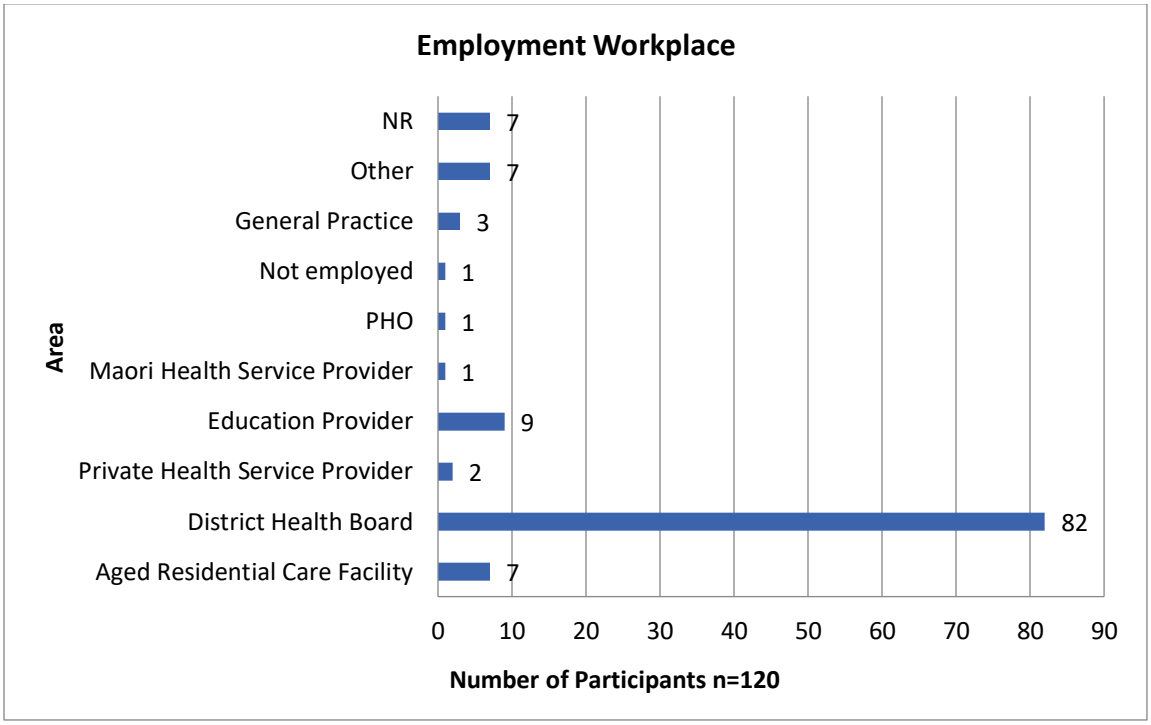
Of the participants canvassed, 93.9% were in employment: 59.1% identified as full time, and 34.7% identified as part-time. The “Other’ included the following:

- employment at 0.9 FTE,
- all ENs on the ward are employed for 24hrs per week only,
- maternity leave (temporary)
- casual,
- employed 0.8 FTE,
- Semi-retired.

Full-time equivalent (FTE) details the portion of a full-time worker. For example, 0.9 indicates a person who works nine days out of 10 in a fortnight.

With the high number of respondents employed, either full time or part-time, one could surmise that respondents were knowledgeable from a day-to-day basis of the nursing workforce make-up, workload needs and roles of nursing and care workers. Therefore, the information provided for this research from respondents is contemporary and an up to date perspective by nurses working in clinical and educational settings.

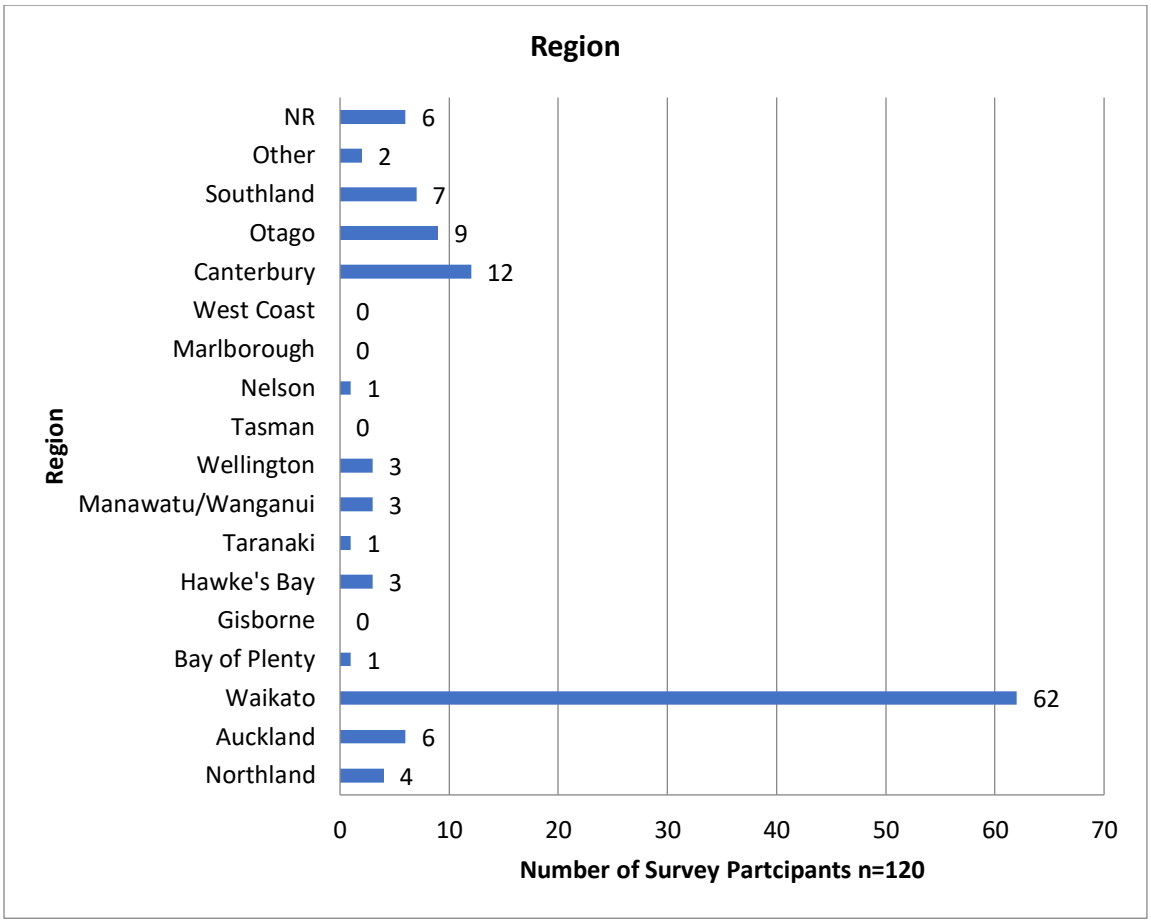
4.2.8. Type of Employment Workplace



Graph 9: Employment workplace

Of the 113 responses received nationwide, 80.5% of respondents are employed by a District Health Board, 7.9% within an education provider and 6.1% in aged residential care. Other areas identified Day Surgery, Outpatient Clinic, Non-Government Organisation (NGO), Large Rural GP Practice, Disability Residential Home, District Nursing, and traveling at present. The predominant employer for our respondents is within a District Health Board. One would expect the number of vacancies to reflect this area of work.

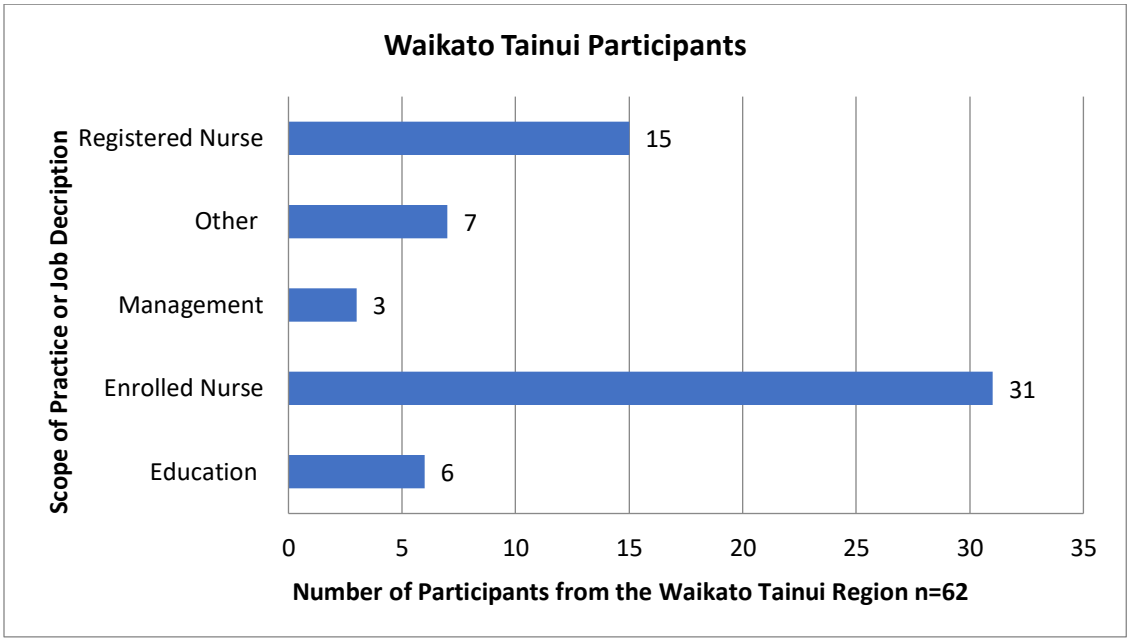
4.2.9. Regional Distribution of Survey Participants



Graph 10: Regional distribution of participants

Of the 114 participants who responded to this question,54.3% were from the Waikato Tainui region, 45.6% were from outside the Waikato Tainui region, and 5.2% did not respond. The Waikato Tainui information is outlined on page 80.

As highlighted previously, this is primarily a Waikato Tainui focussed research; however, the nationwide coverage of the research via media has provided a snapshot of national opinion and a broader capture of information from regional perspectives.



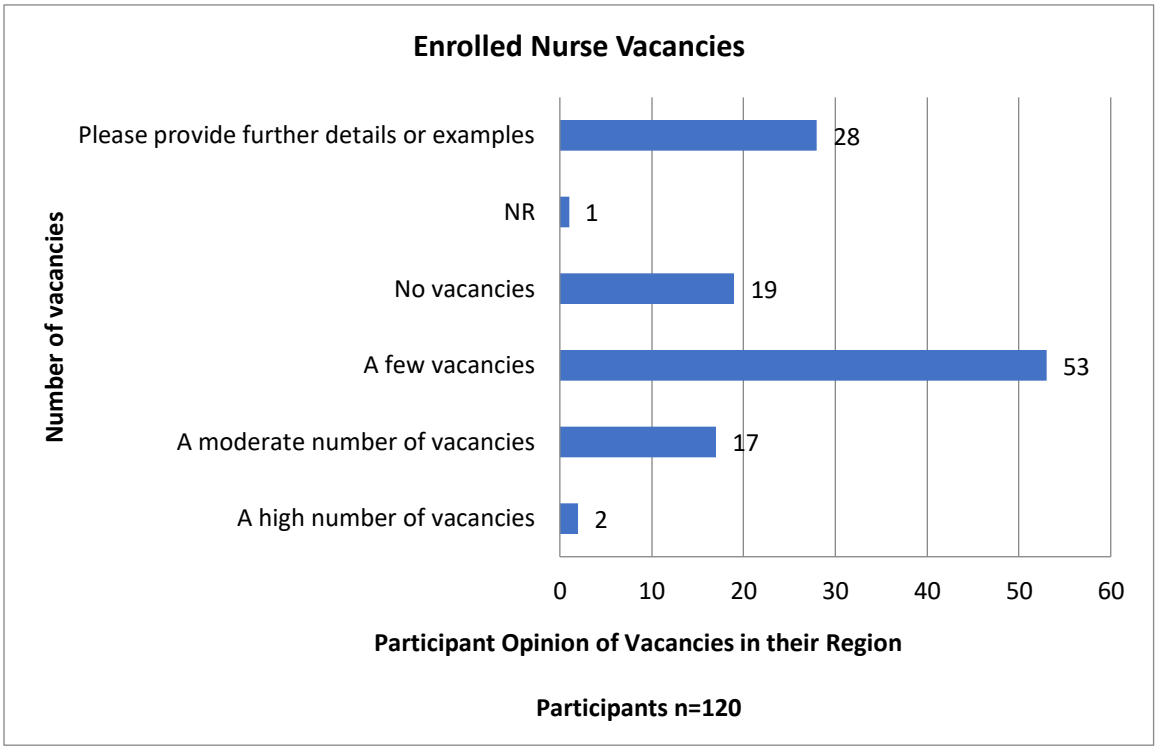
Graph 11: Waikato Tainui participants

Overall, 62 respondents for the research were from the Waikato Tainui region, Of these participants 50% identified as Enrolled Nurses, a further 24.2% identified as Registered Nurses and 4.8% identified as Management and 9.6% identified as Education. Other unspecified was 11.2% of participants.

A similar number of participants from both Enrolled Nursing and Registered Nursing gives a balanced outlook for the region and a broad range of opinions and narrative towards the study from a local knowledge perspective. This provides real-time information and up to date knowledge of the research topic.

Part of the impetus for this research was the lack of employment opportunities for Enrolled Nurses, primarily within the Waikato Tainui region. Participants from around the country were asked for their opinion and comments on how they viewed this.

4.2.10. What is your understanding of employment opportunities for Enrolled Nurses in your region?



Graph 12: Employment opportunities in regions

Of the 91 respondents who utilised the question's scale from no vacancies to a high number of vacancies, 2% stated a high number of vacancies, 18% a moderate number, 58% a few vacancies, and 20% no vacancies. The statistical data shows that there are regional differences in employment opportunities for Enrolled Nurses within New Zealand.

Several narrative responses to this question were received with 28 participants providing qualitative data. Some areas are more proactive than others and have a higher number of vacancies for Enrolled Nurses. Conversely, participants noted minimal vacancies for Enrolled Nurses in other regions or the underutilisation of the role or replacement by other health care workers.

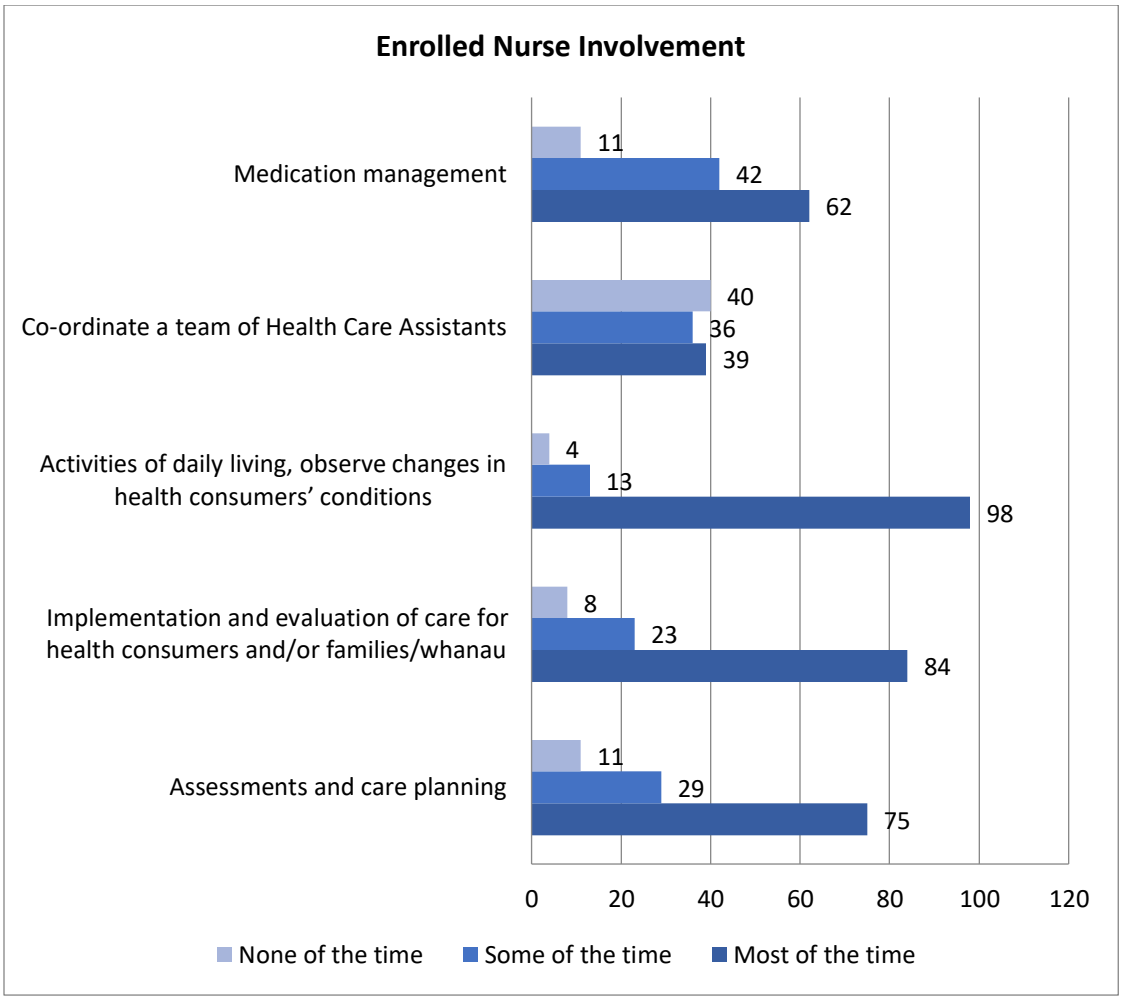
Some of the more pertinent narratives were:

- *My DHB is replacing retiring enrolled nurses with new graduate enrolled nurses and have created more enrolled nurse positions. Hoping when CCDM (Care Capacity Demand Management) is up and running fully that we will get more enrolled nurse positions. Mental Health in my region doesn't employ many enrolled nurses but have a high number of vacancies for RN's. Hoping that will improve.*
- *Very few vacancies, certainly not enough to encourage people to train as an EN.*
- *I took a job that was 1.5 hours away from my home, and so the travel time to and from work every day was about two and a half hours, this on top of working sometimes 13 hours, but there were no other job opportunities, so this was my life for 7 years.... I have applied for a job because it asked for nursing experience, and the contract offer is clinical support worker... the clinical support worker contract under the PSA, will pay me $20,000.00 more than my NZNO MECA EN role will ever pay me, so seriously the whole EN saga is just a mess.*
- *Luckily I work for the XDHB who have been one of the only health boards that have increased the use of ENS.*

The narrative data shows that employment opportunities vary across regions and employers. Narratives were multi-faceted, and comments ranged from areas of employment, numbers of vacancies, use of other health workforce members and understanding of the scope of practice and if this potentially hindered employment. There is a proactive movement by Directors of Nursing of District Health Boards to employ Enrolled Nurses where possible. However, this is also tempered with comments of Enrolled Nurses being replaced with Registered Nurses or to supplement Health Care Assistant roles.

Please see Appendix VI for further narrative comments.

4.2.11. Are ENs involved in the following?

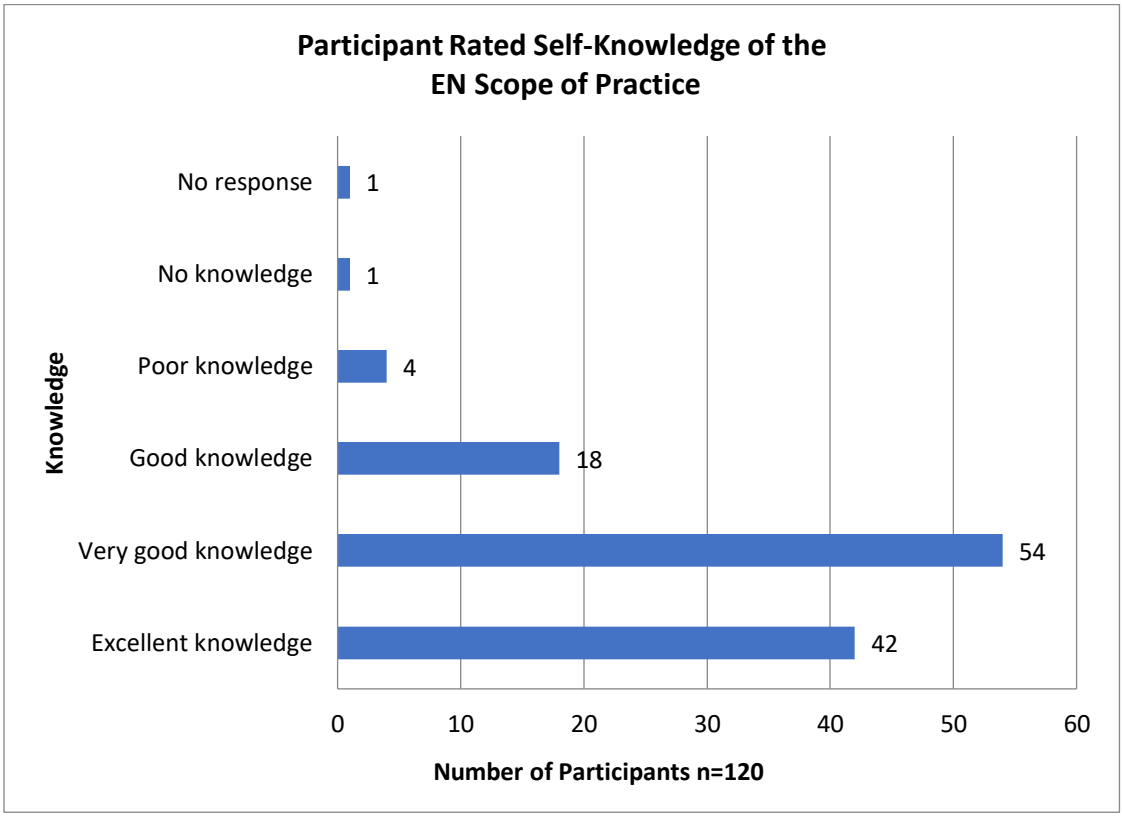


Graph 13: Enrolled Nurses involvement in the scope of practice areas

With the question mark around the understanding of the Enrolled Nurse scope of practice, I was interested in exploring participant understanding of the role and responsibilities of the Enrolled Nurse workforce. From the findings above, Enrolled Nurses are predominantly involved in activities of daily living and observation of changing health consumer conditions, implementation and evaluation of care and assessment and planning and medication management. Co-ordination of a team of Health Care Assistants varies from none of the time to most of the time. It may well reflect the employment area with no HCAs, or the Enrolled Nurse role within that employment area does not have the opportunity for this.

Involvement in activities authorised by their scope of practice may well be dependent upon the place of employment and the role of the Enrolled Nurse within the area. Narrative comments indicate that Enrolled Nurses are unable at times to work to the top of their scope, and their roles are dependent upon what they are allowed to do by their employer.

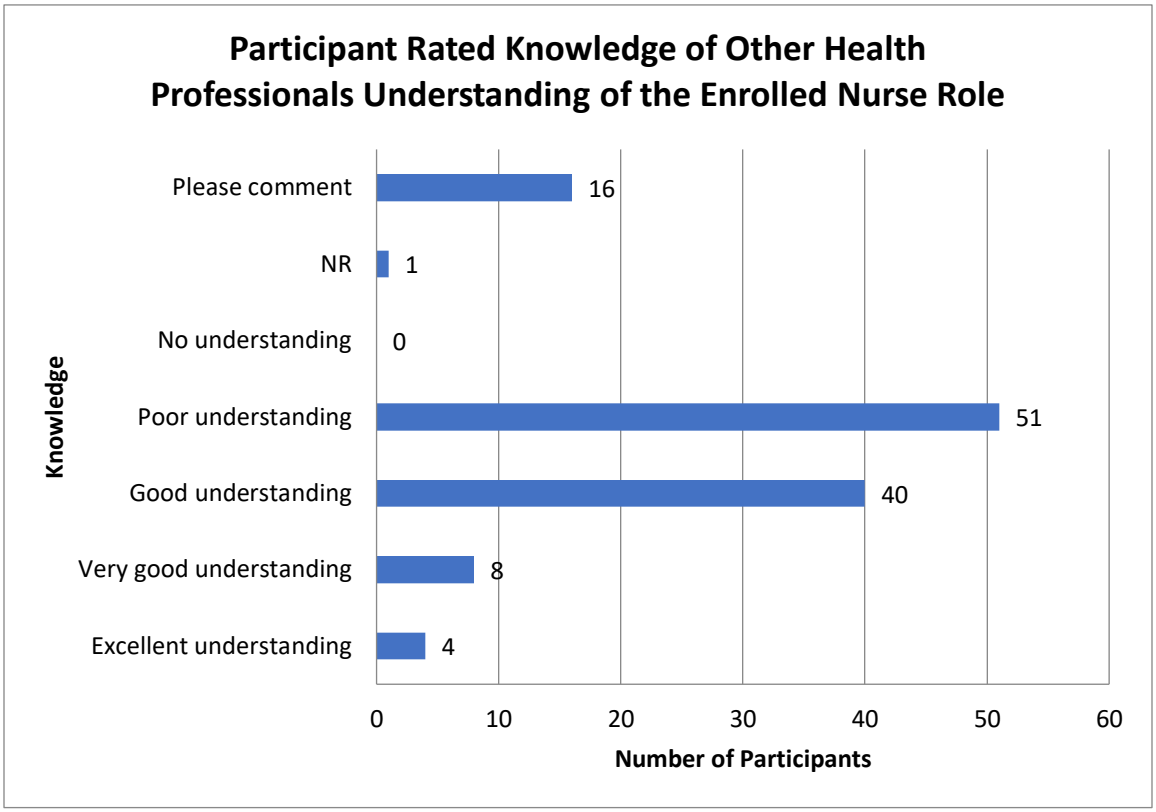
4.2.12. Participant Rated Self-Knowledge of the EN Scope of Practice



Graph 14: Participant rated self-knowledge of the Enrolled Nurse scope of practice

Of the 119 responses received, participant rated self-knowledge of the Enrolled Nurse scope of practice, 95.7% of participants had 'good' to 'excellent' knowledge, and 4.2% had 'poor' or 'no knowledge' of the Enrolled Nurse scope of practice. Data indicates that a high number of participants were knowledgeable of the Enrolled Nurse scope of practice.

4.2.13. Participant Rated Understanding of the Enrolled Nurse Role by Other Health Professionals?



Graph 15: Participant rated knowledge of other health professionals understanding of the Enrolled Nurse role

In comparison to the participant rated self-knowledge, 42.8% of respondents considered other health professionals to have a 'poor' understanding of the Enrolled Nurse role. Conversely, 43% of respondents considered other health professionals to have a 'good' to 'excellent' understanding of the Enrolled Nurse scope of practice. Other participants provided a narrative response, 13%.

Some of the more pertinent narratives are as follows:

- *I find that in my DHB a lot of nurses do understand the scope of practice and if unsure they will ask you. I personally believe that New Zealand wide RN's, DON's, CNM's (charge nurse managers, DHB educators) do not fully understand the enrolled nurse scope of practice. This prevents the EN working to their full scope of practice that was broadened in 2010. I see a lot of comments on social media nursing sites in NZ saying that enrolled nurses are only working in rest homes now. I always respond to these to*

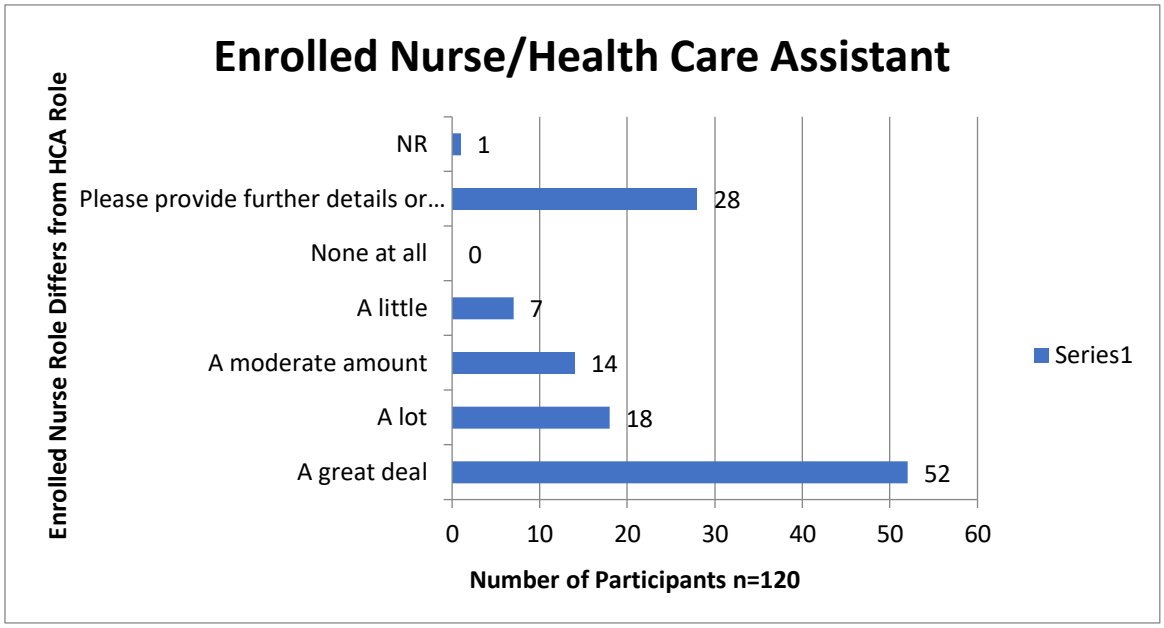
inform the RN's etc. that enrolled nurses' scope of practice was broadened and that EN's are working in acute areas of DHBs within NZ. DHB's are acute hospitals. There are still a few DHB's who haven't come on board as yet in employing enrolled nurses again, mostly in the North Island

- *I am always asked what I can and cannot do.*
- *Sometimes I think the scope of practice needs to extend.... like an RN in graduated steps... Year 1, Year 2, Year 3, with the development of the ENs so does the need to develop the skill set.*
- *I note allied health have asked me about Enrolled nurse scope*
- *Depends who the other health professional is, generally on our specialized ward 95% health professionals have a reasonable understanding of the EN role.*
- *"Depends on who has the understanding, obviously charge nurse manager and clinical nurse manager. Nurse manager knows it well, but it was a new role and it took the registered nurses some time to work out what we could do and how we were monitored during our shift, for example medication, a lot of discussion and eventually it was ironed out and the RNs were aware. The HCAs working on the ward I don't think they understand our role very well at all".*

There is a wide variance on the perception of the Enrolled Nurse scope of practice held by other health professionals (for example allied health) though confusion may well be from within the nursing profession as discussed in the narrative comments. This is potentially an area of further research. The result of this poor understanding may well impact on the integration of Enrolled Nurses within the wider health workforce, amongst interdisciplinary teams and reduces their capacity to work to the top of their scope if colleagues are unaware of their skill set.

Please see Appendix VI for further narrative comments

4.2.14. How does the Enrolled Nurse role differ from the Health Care Assistant role?



Graph 16: How the Enrolled Nurse differs from a Health Care Assistant

I was interested in ascertaining respondent's thoughts on how the Enrolled Nurse role differed to other health care professionals and non-regulated workforce. From the literature review, it was noted that due to the recent pay equity changes for Health Care Assistants, and the promotion of this non-regulated workforce within the health sector, the Enrolled Nurse had difficulty with role confusion and competition for employment and remuneration. Of the 91 participants who chose the Likert scale to respond, 57.1% of participants thought the Enrolled Nurse role differed a great deal from the HCA role. A further, 19.7% thought it differed a lot, 15.3% thought it differed a moderate amount, 7.6% thought it was a little, and 23.2% of 119 respondents provided a comment rather than the scale.

Comments varied from respondents. However, they predominantly stated that the Enrolled Nurse was a trained nurse with a specific scope of practice and regulated by the Nursing Council of New Zealand. Health Care Assistants have a job description, are not regulated, and have a reduced level of training; however, they do complete nursing tasks. These tasks include medication administration in aged residential care facilities.

Some of the significant comments are as follows:

- *The enrolled nurse has a scope of practice; they are a regulated workforce and enabled to work to the top of their scope of practice. All enrolled nurses know their scope of practice. The HCA's are an unregulated workforce and provide a support to the RN and EN, helping with bed sponges, mobilising a patient, doing ward tasks, HCA's have a position description not a scope of practice.*
- *In our facility, not a huge difference when compared to Level 4 Senior HCA's but quite a significant difference if compared to a Level 0, 1, 2, 3 HCA*
- *As an Enrolled nurse I am responsible for my patient's day to day care including most of the medication management within my scope. All care plans and any medical issues that may arise. We also communicate directly with all team members involved in the care of the patient and the family of said patient. So yes as an EN there is a very big difference between the two.*
- *HCA have no formal training they are not regulated, we have some wonderful HCA but as ENs we are aware of the professional boundaries between patients and we can educate patients on best practice this is within our roles and with input if required by RNs. Like RNs we ENs are responsible for our patients, for ENs this means keeping our RNs up to date with any changes in our Patients. We are lucky we work in a team environment and communication is key*
- *Only real difference is that we do medication, and most of the time HCA get paid more.*
- *Enrolled nurses must adhere to their Code of Conduct and competencies. These along with their position description can and does limit their work functioning. In reality depending on who they are employed by, their level of education (formal NZQA qualifications and what is provided by their employers) and if there are RNs or ENs present in their workforce HCAs can carry out a vast range of tasks unrestricted by Codes and competencies. HCAs can carry out non-nursing tasks and nursing task as directed. This makes them a highly flexible and versatile if not highly skilled workforce. HCAs do not legally have to be directed by an RN.*

Please see Appendix VI for further narrative comments.

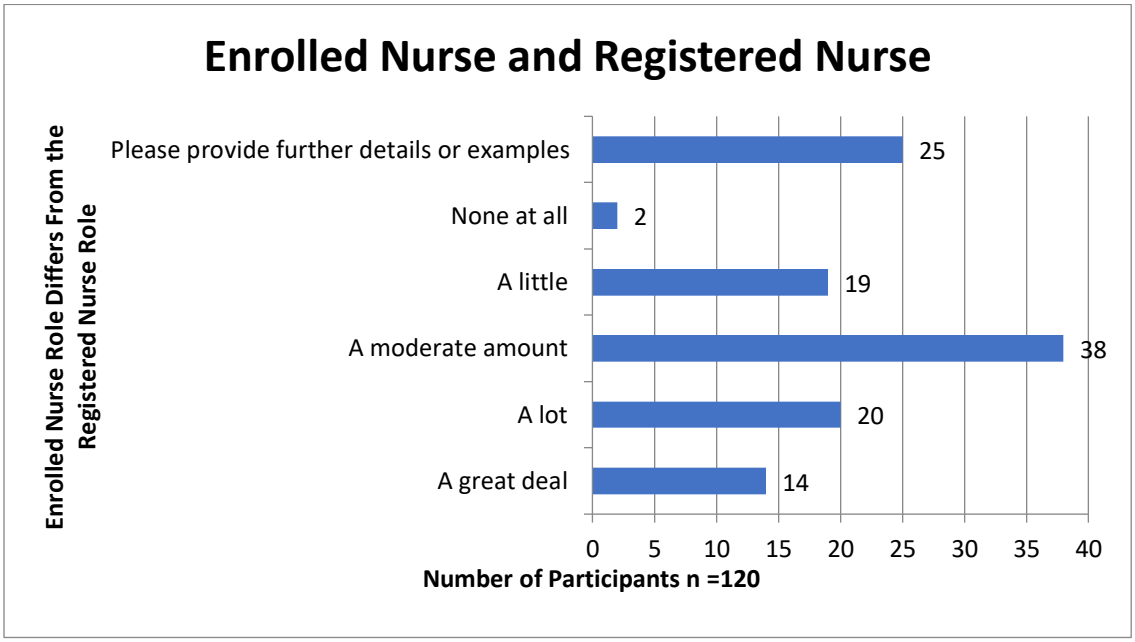
It is essential to consider whether the skill set of some Health Care Assistants has impacted on the ability of the Enrolled Nurse to be employed or to carry out their trained role within a health environment.

Furthermore, there is a potential risk of utilising Health Care Assistants to carry out nursing skills without sufficient training and the clinical /critical thinking underpinning this.

The implementation of the two roles may, at times, appear similar. However, the diagnostic reasoning and knowledge will be more advanced for the Enrolled Nurse.

Conversely, this can also be seen in comparison to the Registered Nurse role in the next question.

4.2.15. How does the Enrolled Nurse role differ from the Registered Nurse role?



Graph 17: How the Enrolled Nurse differs from the Registered Nurse

I was interested in ascertaining the respondent's thoughts on how the Enrolled Nurse role differed to the Registered Nurse role.

Of the 93 participants who chose the Likert scale to respond15% of participants thought the Enrolled Nurse role differed a great deal from the Registered Nurse role, and 21.5% thought it differed a lot. A moderate amount was chosen by 40.8% of participants, with 20.4% thought it was a little. No difference in roles was 2.1%. Of the 120 participants, 20.8% provided a comment.

From the narrative comments, there is a clear delineation and understanding of the scope of each nurse, direction and delegation responsibilities and in particular what the Enrolled Nurse cannot do.

Pertinent comments are as follows:

- *Registered Nurses provide Direction and Delegation to the enrolled nurse. The Enrolled nurse reports to the RN of any concerns they have with a patient. Most RN's I work with, trust me to contact the house officer or others re my concerns, I keep the RN informed and we discuss the nursing care etc., I usually keep the patient. The RN is supposed to take the complex patients, but I do get complex patients as I work on a busy heavy surgical ward. As enrolled nurses we do our own medications, IV fluids, unless an additive has to be added to the fluids, and then the RN will put the IV fluids, up. I have patients with PCA's, VAC's, drains, change the VAC dressings, sometimes these take two people anyway. Patients with CPAP, Airvo, RN administers the IV antibiotics. We do team nursing. Many of the older ENs have developed their knowledge over many years of working and are mines of information. Some, as with RNs, are not.*

- *E/N role limited to a degree but invaluable resource for the R/N*

- *Although the EN works under the direction and delegation of an RN the work load is the same and apart from some medication administration the role is quite similar. And of course the pay scale. As an EN nurse the work has increased into if I dare say a mini RN roll but the pay does not reflect this*

- *Again I think this depends on the area that we work in, were I work at the moment the only difference is that I don't co-ordinate a shift otherwise I do everything the RN does*

- *Personally I think our roles are both very important and I think in many ways they are similar, for e.g. if my patient becomes unwell, I wish to continue looking after them but with the RN also, a team approach. My EN job is always to inform the RN of changes in our patients, although as an EN we do our own medication, and we can put up IV Saline, and be second checkers for other IV ABs and fluids certified RNS need to be the one who admin the IV ABS or two RNs do PICC admin*

- *With a strong focus on primary care in the acute areas an EN having a case load was sometimes burdensome for the RN because there were things that they couldn't do. So, the RN carried their own caseload plus do things that the EN couldn't do*

- *With regard to difference between RNs and ENs. ... We need to differentiate between competence and capability here as well so you know if you look at the EN programme is it half the time of the RN and it is a level 4 and 5, so the difference between level 5 and level 7 when you think about diagnostic reasoning... it is very significant, if you think about the level of science that they do at EN level it is going to be around implementation of care rather than diagnostic reasoning. So those are the big differences capability and diagnostic reasoning ... and it is also in terms of accountability. .... In terms of capability a RN is going to have a higher level of ability because an RN is not just entry to practice an RN may be mid-level in terms of capability or at a specialist level and the RN scope is really broad and has a huge depth to it. So if you want to take an EN and compare them to a new graduate, the EN has some degree of experience and might not look to be a lot of difference but in terms of capability there is a huge difference.*

Please see Appendix VI for further narrative comments.

With over 80% of respondents working within a District Health Board, the narrative examples are strongly influenced by this setting; for example, the administration of intravenous and opioid medications. Experience and teamwork impact on these roles in a clinical setting. The model of care also guides how the positions work. Team nursing contributes to the sharing of the workload rather than individual nursing models that may rely on specific role delineation. The implementation of the two roles may, at times appear similar. However, the diagnostic reasoning and knowledge will be more advanced for the Registered Nurse.

When considering the two previous questions, and the differences between various roles, the notion of skills and knowledge discrepancy is evident. While some positions may on the surface look similar due to the tasks completed, the knowledge base underpinning each role is vastly different. I would like to propose that this could impact on the quality of the care delivered.

Health Care Assistants have a prescriptive role where they complete tasks but are sanctioned to complete traditional nursing skills, without the clinical knowledge and reasoning required to interpret data and changing status of a patient adequately. Health Care Assistants can nevertheless be seen as experts in hands-on care delivery and should be acknowledged for the vital part they play.

Enrolled Nurses have clinical knowledge and reasoning and knowledge for interpreting data and the changing status of a patient. Furthermore, they have completed a prescribed training with theory and clinical experience and exposure to a variety of clinical settings throughout their learning. A significant number of Enrolled Nurses have more than 15 years of experience and are over the age of 55 years of age. These nurses have an incredible amount of knowledge and experience and are vital in the delivery of care, many of whom are experts in their areas and teach other nursing roles.

Enrolled Nurses work under the direction and delegation of a Registered Nurse or other Health Professionals. However, in some settings, this is clearly more of a collaborative team effort. Perhaps it is time to review the wording for direction and delegation to ‘collaboration alongside/with colleagues’.

When considering the role of the Enrolled Nurse with the Registered Nurse, a similar situation can be applied. The Registered Nurse holds an advanced theoretical and clinical reasoning knowledge when compared to an Enrolled Nurse and should, by definition, hold a senior position and added responsibility due to this.

What is essential to acknowledge is the different skill and theory mix of the roles in various settings. In a community setting, for example, a residential care facility, the Health Care Assistant has moved into the domain of the Enrolled Nurse by virtue of the roles they are sanctioned to perform.

The Enrolled Nurse role has been eroded away by this movement.

In a hospital setting, the roles are more clearly defined and embedded in a regimented model of care delivery.

4.2.16. What opportunities do you see for Enrolled Nurses in healthcare?

This question requested narrative responses only from participants, so therefore no graphs or other quantitative data is available. With this question, I was interested in understanding what potential areas of employment and opportunities could be open for Enrolled Nursing. The following narratives offer a broad viewpoint from respondents.

Pertinent narratives noted as follows:

- *So long as ENs are doing a good job in Aged Residential care or hospitals the opportunities are huge, an EN in Invercargill is a District Nurse, some ENs in the dialysis unit doing home dialysis, Dunedin has a Home Team... people are discharged home and RNs ensure they are settled in, care is organised, and they visit them every day for 2 weeks, extended hospital level care, not as a district nurse but a ward nurse if you like, only RNs at present but ENs are more than capable to do that*.
- *A wider scope of areas to work in, I left NZ and lived in x country, and had the most fantastic job over there as an EN, Charge Nurse very supportive,*

EN prior to RN, supportive of whole team working together in collaboration, in NZ there is a very definite class structure , in x country, everyone works together, when I returned I couldn't get a role in that area… was told I'd never get a role, then I went on a mission to get a role in the X Hospital, and it took me 5 years, there are a lot of ENs out there with a lot of experience, I have a lot go give but just need the opportunity it was a long time of searching and I left nursing for a period of time.

- *I believe there is a place for enrolled nurses anywhere in health care, Mental Health, we had an enrolled nurse at conference who works in a GP practice in the far north and she is credentialed in mental health and has her own clinic at the practice. She is doing amazing work with her patients. Iwi providers, general practices, and schools - we used to have enrolled nurses working in private schools boarding facilities and did the rounds with the GP and contacted the GP if any pupils were unwell. Vaccinators, occupational health, public health*
- *Little opportunities exist*
- *Having just attended the EN Conference I was encouraged by the many areas EN's work in and what they offer. It most definitely depends on the DON of the hospital EN's work in as to how many opportunities they get exposed to.*
- *Our ENs are a valued member of the nursing team.*
- *I don't see many opportunities as most hospitals I'm aware of do not hire them (apart from Waikato)*
- *A liability on med surg wards as unable to do IV cares and complex assessments without supervision*
- *None be an R/N today*
- *Great opportunity as there is an aging population and higher acuity of hospital admissions means patients require more practical assistance with ADLs etc.*
- *Simple role, not involved in difficult decision making*
- *Increased opportunities if the registered nurses are aware of a EN scope of practice and a new graduate program for EN was introduced similar to the programme RN have or EN attend the study days that are available to RNs relevant to your area of practice.*

- *I have an amazingly job in a large Rural GPs Practice. So I see huge potential and with ENs managing practical functions in a health care setting, Ward, team or GP practice. Really grounds a good team together as the ENs take the pressure of Jobs like stock and sterilising, really free up the RNs for Care planning and management functions. E.g. we have robust triage system that the RN Team manage.*
- *None in Northland - we are a dying workforce, and it's really frustrating and disappointing*
- *None in the DHB I work - they won't employ them. Once we all leave they will not be replaced with another EN*
- *Ability to work to the top of scope of practice if DHB and employers would allow it. There is much we can and would like to do. Disparities across NZ re scope e.g. IV medication double checking expected in X DHB but not yet in (another) XDHB!*
- *I feel there should be opportunities in all healthcare I think EN are an undervalued work force due to lack understanding of the scope practice. EN can relieve the RN to do the more acute care but can do a lot more than HCA. Older person health is an area I see opportunities for EN.*
- *There would be huge opportunities for ENS in the NZ healthcare system. We should be allowed in all areas apart from areas like CCU ICU and high dependency units. As a Senior EN I work beside RNs with Ventilated patients. Team nursing where ENs can and do have access to RNs prn are all areas suitable for ENs. EN can do complicated dressings and communicate changes as required. We should be seen as important part of the team.*
- *I see there is a place for us as many of us have years of experience have been an EN for 42 years and worked in many different areas, we are undervalued*
- *I'm in aged care, and the world is our oyster, the opportunities out there to work wholly alongside the RNs is unlimited, providing your willing to work at their level within our scope of practice, also that the company you work for supports you wages and team wise.*
- *Excellent opportunities to contribute to client care*
- *Sadly, I believe their roles are limited because of the legal requirement of oversight from RNs and more because of the flexibility, versatility,*

availability and perceived cost savings HCA roles offer some less responsible employers

- *EN's are an integral part of our service. They provide clinical support to both the RN's and the HCA's. They provide knowledge regarding medical comorbidities and work in the capacity of mentorship and guidance to junior staff while also assuming increased clinical responsibilities when the RN on duty is busy.*
- *Extensive roles in primary care. A true reflection of well care, avoiding ambulance at the bottom of the cliff approach to health care.*
- *I think that ENs could be involved in all areas of healthcare with training and supervision. The X heath service have employed many ENs and I believe that this has not led to any adverse outcomes and should not if the EN is working within her/his scope of practice.*

Please see Appendix VI for further comments.

The narrative examples offer a broad range of potential opportunities for Enrolled Nurses within the New Zealand health sector. Participants have highlighted employment opportunities and a wide variety of areas where Enrolled Nurses could potentially expand their role. However, this is largely dependent upon the employer allowing Enrolled Nurses to work in this capacity and to the top of their scope. Conversely, comments also state there are few opportunities available, and the role is limited with Enrolled Nurses being replaced by other health care staff.

4.2.17. What challenges do you see for Enrolled Nurses in healthcare?

This question requested narrative responses only from participants, so therefore no graphs or other quantitative data is available. With this question, I was interested in understanding what challenges are seen for Enrolled Nursing within the Aotearoa New Zealand healthcare setting. The following narratives offer a broad viewpoint from respondents.

Pertinent narratives are as follows:

- *"Definitely the discrimination, a lot of uncertainty, you feel like you have to prove yourself, prove your worth, even though you have the qualification it*

is not taken seriously... it would be a real struggle in a smaller area to incorporate the Enrolled Nurse, purely because of the lack of understanding".

- *The challenges are that other nurses do not understand the scope of practice of the enrolled nurse. Direction and Delegation are the confusing words for most in the enrolled nurse scope of practice. The enrolled nurse section National Committee have been in discussion with the Nursing Council of New Zealand re this and that our scope of practice needs to be reviewed as it is now 9 years since it was broadened.*
- *How many ENs trained that don't get a job?*
- *EN's being able to practice to their full potential and still within their scope of practice due to a poor understanding of their scope by employers.*
- *The limitations in their practice at times can be a challenge especially on a busy ward. It can be difficult in terms of workload when an RN has to take time away from their patient load to administer IVABs etc.*
- *Mainly the health professionals not knowing the scope of the Enrolled nurse. And the lack of jobs available for Enrolled Nurses.*
- *Unable to do complex cares without RN oversight and we already have a tough workload. ENs unable to do IV access which increases the RN workload rather than assisting.*
- *Understanding of EN scope of practice with international staff*
- *Getting respect from the RN workforce to work to the ENs optimum skill level*
- *There are a lot of challenges such as older RNs not accepting ENs but although a few new graduated RNs don't understand why we have ENs and can be difficult to work with as they don't believe it in it.*
- *The health care assistants accepting we have a vital role they see us as a threat to their positions.*
- *Understanding the scope of practice of the EN and have supportive RNs.*
- *Employers understanding their role and how to utilise this effectively*
- *Our judgement is always questioned and often changed by the registered nurse*
- *Work, I left my role as an EN last August for extended bereavement leave, and as was my concern, I have been unable to get another EN job, I am now working as a Support Worker, well actually the job advert was asking*

for a nurse, but the job contract offer was that of a Support Worker, I accepted the job as there is no other work, no I am concerned about keeping up study and clinical hours, or I may lose my Nursing registration

- *Other health professionals not understanding our scope of practice*
- *HCA's doing training that allows them to do vital signs, recording in patient notes, able to provide patient cares.*
- *Not getting work at the DHBs. Only being employed in rest homes.*
- *HCA having more input*
- *Not being valued enough, RN's not understanding EN role*
- *Be treated the same as RN not caregivers*
- *Maybe being employed as we are seen as being cheaper than RN's and left with no guidance*
- *Acceptance*
- *The challenges for EN are the lack of knowledge by other health workers, including employers. Seriously many places especially rest homes are using HCAs who although might have experience are not trained professionals.*
- *Trying to get the individual DONS and CEO to employ more of us in the DHB*
- *Having our level of work reflected in our wage bracket, one place I worked at (employed as an EN) I was paid less than an HCA*
- *The changes in the scope and the historical context of EN education and scopes confuse people. I also think that the different education between now and older EN's challenges health professionals.*
- *Due to the acuity of the current health force with patients having more acute and unstable health problems means that EN are not able to fill the gaps by the lack of RN's to deal with this work load.*
- *An increase by the employer to seek HCA's to fulfil job positions*
- *In NZ there is a very definite, class structure.*
- *When I returned I couldn't get a role in my chosen are. There were very few vacancies.... I went on a mission to get a role in the X Hospital, and it took me 5 years, there are a lot of ENs out there with a lot of experience, I have a lot go give but just need the opportunity. It was a long time of searching and I left nursing for a period of time. I took jobs as an HCA for*

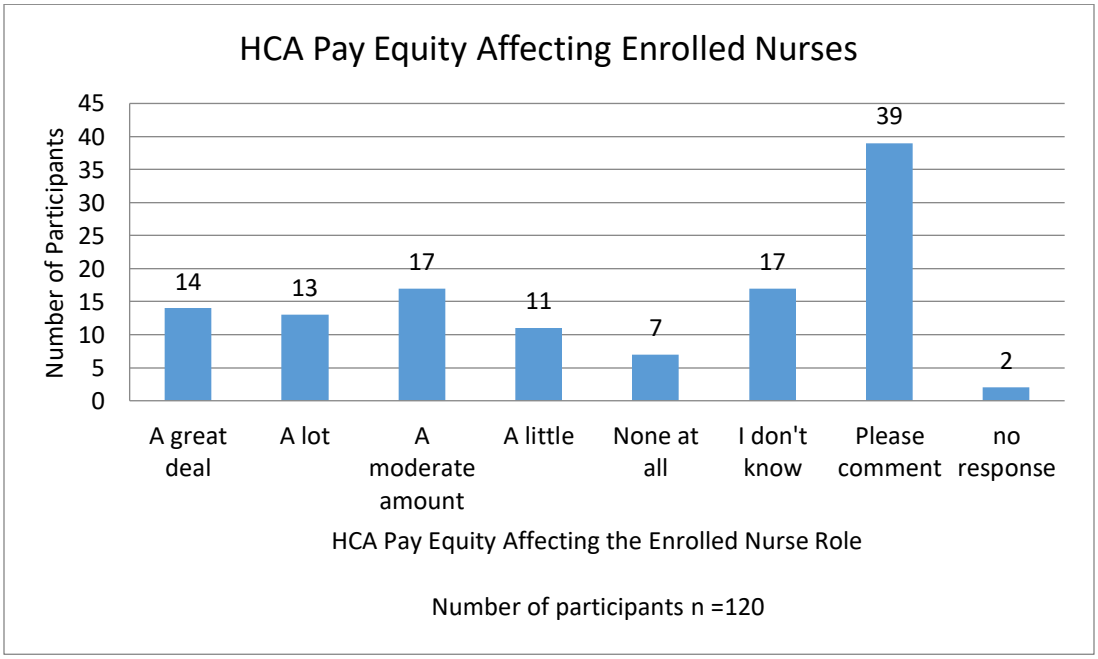
a period of time, I've got a qualification, but I shouldn't have had to do that, but I should have been able to work as an EN

- *In trained in the 80s, we worked together, we worked fantastically together with the staff nurses, we were trained to do nasogastric, subcuts etc., and when we returned to NZ there was no way we were allowed to do that.*
- *We went to an xxx study day, every nurse on the ward should be able to do this if required, and when we returned to the ward it was decided only RNs were allowed to. Why can't we all do it together? There is always that division.*

Please see Appendix VI for further comments.

The narrative comments from the respondents have highlighted areas such as discrimination, competition with non-regulated staff, lack of opportunities for learning and progression, lack of respect and acceptance of the role and the specific skill set offered by Enrolled Nurses. Confusion of the scope of practice and employment limitations of the role is also noted in the comments.

4.2.18. How do you think the recent pay equity changes for Health Care Assistants have affected the role of the Enrolled Nurse?



Graph 18: Pay equity for Health Care Assistants - effect on Enrolled Nurses

This question is in response to the literature review discussion regarding the effect of pay equity for Health Care Assistants on the role of the Enrolled Nurse, see Section 1.6.2.6.

Of the 118 responses to this question,11.8% of participants thought the pay equity affected the Enrolled Nurse a great deal, 11% thought it affected Enrolled Nurses a lot, 14.4% thought it affected a moderate amount. Participants considered the recent pay equity had little effect at 9.32%, and 5.9% thought there was no effect, 14.4% did not know. The number of participants responding with a comment was 33%.

Pertinent narrative responses are as follows:

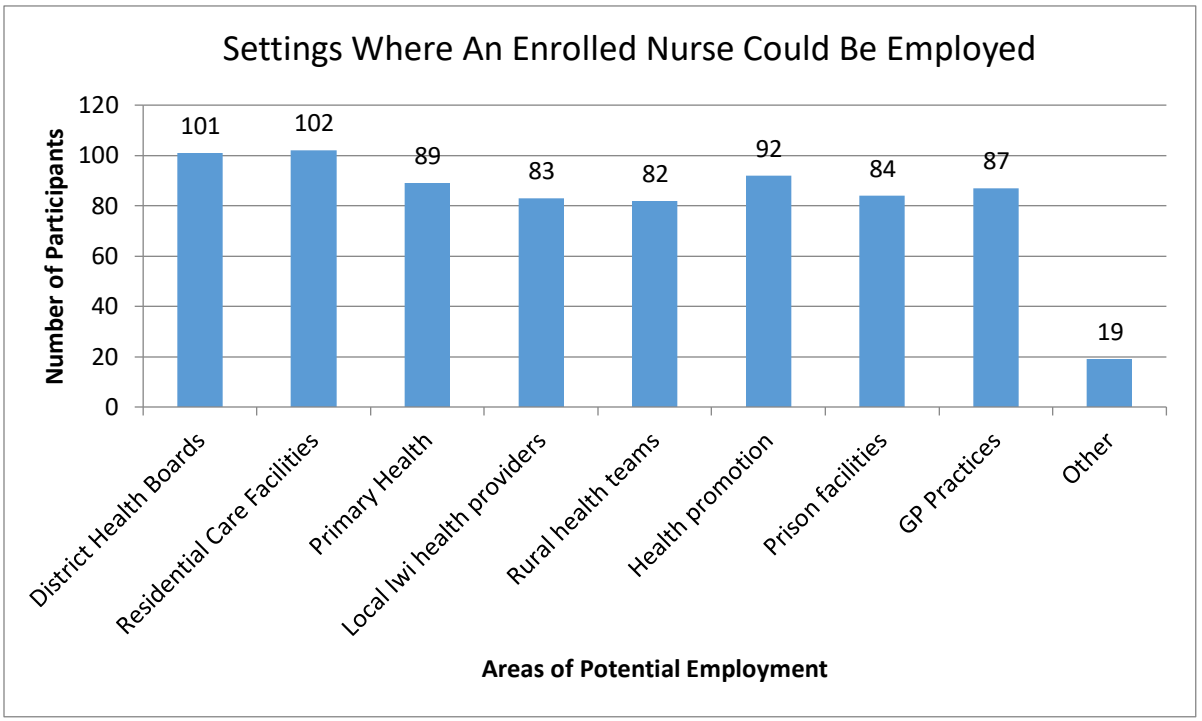
- *A great deal, especially in aged care where the HCA got pay equity. I have heard that some EN's changed over to HCA. But NZNO and ETu have been doing some great work in regard to this when collective contracts come up, especially with some of the big corporate owned facilities in NZ. A few of these have been accepting of this and have been giving substantial pay increases to EN's and the RN's within these facilities. It's the smaller family owned aged care facilities that can't meet the pay equity payments and changed the title of the HCA's to home assistants!!! Waiting for pay equity in the DHB's and hopefully delivers for EN's. I as an enrolled nurse believe that we are worth more than our current hourly rate. A new step 4 for enrolled nurses in DHB's was introduced on the 6th May 2019 and brings the EN rate up to $26.22 approx. per hour. Another 3% wage increase due in August 2019, which will be just over $27.00 per hour.*
- *How can I be worth only a dollar more than an HCA? I fully support HCA's and the job they do, and they deserve their pay rise, but the gap is now too small between the 2 of us.*
- *They are almost on our level of pay and no responsibly*
- *Compare the RN and the EN highest steps add PDRP and there's $20,000 difference and we do the same thing most of the time*
- *There isn't really a major difference with each pay considering EN's have a diploma and student loan etc. Whereas HCAs don't have a student loan*
- *New grad ENs earn less than HCAs and top rate ENs earn just above HCAs top pay rate, ENs are under paid for the responsibility they have.*

- *I am delighted HCA are now paid fairly. The way things stand at the moment it is making ENs much more viable. For the same pay you can get more extensively trained nurse who is regulated on a register.*
- *I thought we would get more offers, that employers would think I might as well employ an EN, they are paid basically the same, but they haven't, it's like people are scared of us, they don't know how to handle an EN, they don't know what we can do, and they are completely confused by us. Or we get the opposite, we get employed to do everything that the RN is doing, as so you feel taken advantage of, I would run a whole inpatient ward on my own in my last job, and I would help train new RN's, but we get paid significantly less. Also, you have to stand up and say, hey this is out of my scope of practice-you are expecting too much, so it's either not employed at all, or expected to do the same as the RN.*
- *Not exactly an incentive to train as an EN and have all the responsibilities of a registered health professional when there is little difference in pay with HCAs. Remunerate ENs accordingly, ensure DHBs employ more ENs before churning out more new grads and add a step 5 to the pay scale.*
- *Why do EN training when HCAs earn just as much.*
- *My job hasn't changed, but does seem unfair while I change a male, female catheter or SPC for e.g. and the HCA changes the drainage bag and for that difference I get $1 more an hour!*
- *I think it insults enrolled nurse expertise and formal training. But there has to be fair pay for all nursing roles and HCA is an important one*
- *Even with HCAs costing more the recent pay increases in the DHB MECA may have a flow on effect ensuring ENs are paid more in the private sector also. This may prove to be detrimental to ENs as Employers will look to employ HCAs with few working restrictions even if their pays are almost equivalent to ENs or RNs who can provide the full range of comprehensive care and can direct and delegate HCAs and ENs. Those employers who truly care about the quality of care their clients receive will hopefully see the true worth of ENs in their workforce and will look to employ more and hold those ENs they already have.*

Please see Appendix VI for further comments.

Comments were supportive of the pay increase for Health Care Assistants. However, this now reduced the gap for remuneration between Enrolled Nurses and care workers. Respondents have highlighted greater responsibility, study and student loans and expertise of the Enrolled Nurse is significant in comparison with the care workers and remuneration should acknowledge this. However, this is not the case, and a feeling of unfairness permeates the narratives.

4.2.19. Working within the Enrolled Nurse scope of practice, what settings could an Enrolled Nurse be employed in?



Graph 19: Settings an Enrolled Nurse could be employed in

The response to this question has provided a robust platform for Enrolled Nurses with potential employment opportunities in a variety of areas. Participants identified areas where they thought the Enrolled Nurse role could be utilised. Participants also identified other areas or examples where Enrolled Nurses are currently working or could work. Respondents overwhelmingly felt that Enrolled Nurses could be working in a wealth of different employment areas

Pertinent narratives are as follows:

- *The Corrections Department changed its model of care about three years ago and commenced employing enrolled nurses at MT Eden, the remand facility in Auckland and another facility in Auckland. They do primary health care model. The enrolled nurses are provided with lots of education and support. Hoping that eventually that the other correction facilities within New Zealand will commence employing enrolled nurses.*
- *There is a place for an EN in all these areas, just requires the RN to accept this knowledge*
- *All of the above, we only need one other RN to report to*
- *We could be employed anywhere as long as we have direction and delegation of an RN or other relevant health professional*
- *District nursing, mental health nursing all areas, except for the high dependency like ICU CCU. Especially where there is a team approach.*
- *Rehab and mental health*
- *ENs can and should work anywhere there are robust policies and procedures established, suitable clinical educational opportunities and RNs readily available to delegate and direct care to them. Whilst not as comprehensively trained as RN they are still a skilled workforce that can offer safe care to clients- in most cases much safer than relatively uneducated, unregulated HCAs*
- *Schools, district nursing*
- *No limitations*
- *I'd love to be able to work in hospice, palliative care, huge role for ENS there, it's about caring and nurturing, and I think there are a huge role for ENS in that area.*

Chapter 5. Discussion of Emerging Themes

Discussion with Stakeholders

Throughout the project, I have had extensive discussions with stakeholders. This has occurred monthly, quarterly, at variable times or as an introductory discussion about the research which explored the participants perceptions of the role Enrolled Nurses.

Several commonalities are identified from these stakeholder discussions:

- Stakeholders viewed the Enrolled Nurse role positively within the health workforce of Aotearoa New Zealand
- Stakeholders proactively include Enrolled Nurses into their staffing matrix or have expressed a desire to continue to expand this role within their organisation
- A comprehensive orientation is vital for the transition of new employees and especially new graduate nurses
- On-going professional development opportunities need to be made available to ensure continued knowledge attainment, regulatory compliance and career growth
- Recognition of the contribution of Enrolled Nurses in the Aotearoa New Zealand nursing workforce
- Māori Health Providers indicated continuing support and/or interest in including the Enrolled Nurse role within their staffing matrix, and supporting staff to train
- Rural hospitals are keen to continue the discussion with Wintec on the potential training and education of Enrolled Nurse students within their rural areas
- Stakeholders are keen to contribute to future developments and innovation with the Enrolled Nurse role

These discussions were heartening as they provided a direct contrast to the initial comments raised by Enrolled Nurse students and narratives offered by respondents in the research.

In addition to this, I expanded my knowledge of the NZNO Enrolled Nurse Section, the key organisation supporting the Enrolled Nurse role within Aotearoa New Zealand. The section provides education, advice and support to its members, the nursing workforce and outside organisations. They offer several regional workshops and hold an annual conference. The executive members are actively involved in supporting the role of the Enrolled Nurse throughout Aotearoa New Zealand and are part of national working groups focussed on contemporary nursing issues. The NZNO Enrolled Nurse Section is a strong voice for nurses and ensures that the Enrolled Nurse role features in the current nursing and political landscape.

These elements provide a positive foundation for employment and expansion of the role. It is important to consider these when reviewing the themes identified in the study.

Sub-groups identified from the research

The sub-groups identified within the research project are discussed in more detail in this section. Pertinent narratives have accompanied these discussions to underpin the themes represented.

1. Historical hurt and devaluing of the Enrolled Nurse Role
2. Confusion of the Enrolled Nurse Scope of Practice
3. Employment – regional and employer differences
4. Competition with other roles
5. Pay parity/disparity
6. Progression, education,
7. Support needed for the role challenges and opportunities

5.1. Historical Hurt and De-valuing of the Enrolled Nurse Role

Of particular note, when reviewing the data captured, the theme of 'hurt' and feeling 'devalued' as a trained nurse is apparent.

The Enrolled Nurse role has undergone significant changes since its inception in 1939: name changes, length of training, role description, changes to the scope of practice, employment and redundancies. Enrolled Nurses were given the option to retrain as a registered nurse or face demotion to be a nurse assistant. Some chose to leave, while others stayed.

- *I have been employed in a Maternity facility for 25 plus years. There used to be a strong EN workforce in my area until Midwifery decided only midwives could look after mothers and babies.*

- *I have seen a lot, (pause) what we got asked to do when it suited, to what then we couldn't do and what then we could do again, I used to run a surgical ward with a Nurse Aid. Then all of a sudden we couldn't do any of that. It's been a confusing time for ENs, especially the older ENs.... these new ENs are going to come out and hopefully just fly if they understand their scope of practice and those around them understand their scope of practice.*

Enrolled Nurse training ceased for several years and was then resurrected over a decade ago with a new scope of practice. Since then, the role has faced competition within the health sector for job visibility and security. This has impacted on the position of the Enrolled Nurse within the Aotearoa New Zealand health and nursing workforce with confusion regarding their scope of practice, and competition with other health workers.

The Enrolled Nurse role has been described as a *"political football".*

- *ENs have been very poorly treated professionally because it has depended on what the workforce demands have looked like. When workforce demands have been heavy and registered nurses scarce, then ENs are asked to step up and when that picture changes they are pushed back. So I think they have been, I don't know if that abused is too strong a word really, professional group.*

The further devaluing of the Enrolled Nurse role are noted with regional limitations for employment opportunities, policies restricting the role of the nurse, biased recruitment strategies and employment and fiscal competition with non-regulated health care assistants.

- *The DHB consistently advertises RN/EN positions but I was told by a CNM that they don't want ENs but are obliged to advertise it! A waste of our time and an insult.*

Many comments submitted to the survey applauded the landmark pay increase for Health Care Assistants and participants felt this was long overdue. However, at the same time, this has greatly affected the Enrolled nurse remuneration, and in some areas, Health Care Assistants are paid more than an Enrolled Nurse. This creates a significant divide between these two valued members of the workforce.

- *How can I be worth only a dollar more than an HCA? I fully support HCA's and the job they do, and they deserve their pay rise, but the gap is now too small between the 2 of us.*

5.2. Confusion on the Enrolled Nurse Scope of Practice

Jacob et al. (2016) discussed the need to educate the wider workforce on the role of the Enrolled Nurse, with the intended outcome of increased employment expected due to their increased skills, and lower cost of employment compared with a Registered Nurse. Understanding of their scope of practice is paramount to this.

Confusion still reigns on the understanding of the contribution from Enrolled Nurses within today's health workforce. Findings of the study show that Enrolled Nurses are very knowledgeable and highly articulate when it comes knowing their scope and being able to describe and discuss this. However, the findings of the study indicated a balanced view of respondent's perceptions of other health professionals understanding of their scope of practice: 42.8% of survey participants felt other disciplines had a poor understanding, and 43% of survey participants, a good to excellent understanding by others.

The change of the Scope of Practice, albeit some time ago now, continues to cause confusion. This change, along with significant regional and employer variances continues to fuel this confusion.

- *I find that in my DHB a lot of nurses do understand the scope of practice and if unsure they will ask you. I personally believe that New Zealand wide RN's, DON's, CNM's (charge nurse managers, DHB educators) do not fully understand the enrolled nurse scope of practice. This prevents the EN working to their full scope of practice that was broadened in 2010.*
- *I am always asked what I can and cannot do.*
- *I work right to the top of my scope- which is excellent.*
- *Depends who the other health professional is, generally on our specialized ward 95% health professionals have a reasonable understanding of the EN role.*
- *I am constantly standing up for my scope and explaining why I can't do certain tasks and work independently in certain areas.*
- *This may be wishful thinking, but each RN must speak about direction and delegation of Enrolled Nurses in their professional development portfolio.*

- *I've heard it quite a few times that enrolled nurses are second tier nurses and I think it's trying to get the understanding that just because you are enrolled nurse as opposed to a registered nurse, you're not second rate and you're not second tier. They kind of get the understanding that 'oh you couldn't finish your degree so why are you an enrolled nurse? I always say that I am not a second-tier nurse and I am not a second-rate nurse. I can do what anyone deems me to do I can do it as long as they deem me to do it and I'm still with her my scope of practice*

- *During my training I felt quite vulnerable.... never placed with an enrolled nurse.... many organisations did not have a good understanding of the enrolled nurse.... confusing regarding the old and new scope of practice.*

Given Enrolled Nurses are employed in a variety of areas with vastly different role definitions, it is not difficult to understand why there is confusion on what a nurse with this training can do.

Furthermore, the debate about Enrolled Nurse working 'under the direction and delegation' of a Registered Nurse or other health professional continues. The Enrolled Nurse is a health professional in their own right and makes a valuable contribution to health care delivery and supports the whole health team. Would the term 'in collaboration with the Registered Nurse or other health professionals' provide clarity for the Enrolled Nurse?

I assert that if Enrolled Nurses were able to work at the top of their scope of practice consistently, then this confusion would be reduced.

5.3. Regional and Employer Variances

Across Aotearoa New Zealand there are significant variances in the way Enrolled Nurses are employed as well as in what is (or isn't) part of their role. While this study focused specifically on the Waikato Tainui region, contributors from around the country were invited to participate. Of the 114 participants who responded to the regional question, 54.3% were from the Waikato Tainui region, 45.6% were from outside the Waikato Tainui region. It is important to note this is not an Aotearoa New Zealand wide study, and therefore the results are a guide only and not representative of the whole country.

From the research and narrative comments, it is apparent, what Enrolled Nurses can do in one area is not necessarily replicated within other regions or settings.

- *In aged care ENs can be managing shift or giving out medications, in a secondary setting it is much more a team approach and depends upon acuity and how patients are allocated to RNs and ENs.*

One question posed in the survey asked participants to consider opportunities for Enrolled Nurse. One possible opportunity highlighted by a survey participant was:

- *"... the ability to work to the top of scope of practice if DHB and employers would allow it. There is much we can and would like to do. Disparities across NZ re scope e.g. IV medication double checking expected in XDHB but not yet in (another) XDHB!"*

Further to this, a reflection from a participant at the recent EN conference noted:

- *Having just attended the EN Conference I was encouraged by the many areas EN's work in and what they offer. It most definitely depends on the DON of the hospital EN's work in as to how many opportunities they get exposed to.*
- *There are a lot of opportunities – I was so encouraged to hear about the ENs around the country who are working in a variety of areas... district nursing... dialysis... diabetes education, cervical smear taking...ED...*

Other participants wrote:

- *My DHB is replacing retiring enrolled nurses with new graduate enrolled nurses and have created more enrolled nurse positions. Hoping when CCDM up and running fully that we will get more enrolled nurse positions. Mental Health in my region doesn't employ many enrolled nurses but have a high number of vacancies for RN's. Hoping that will improve.*
- *Until last wage round I could not find vacancies within my field at DHB, other care facilities offered very limited positions and salary offered was poor.*

- *I don't know (about vacancies), and I wonder if there might be more if people understood the scope and opportunities an EN offers.*
- *A lot of EN's are being used to supplement HCA positions and not working to their full capacity or scope of practice.*
- *Only in aged care. None at DHB.*
- *If I didn't have a personal connection there would be no employment opportunities in my area...*

Anecdotally, employment opportunities are more common in the South Island, particularly within the Canterbury DHB and Southern DHB areas, whereas in the North Island, there have been fewer vacancies.

- *I was travelling an hour and half in two different directions to work in rest homes because there were no jobs in the Waikato area …. the DHB is quite difficult to get into and I think applied for about a year before we even got a look at for an interview and then we didn't have enough experience.*
- *I am aware the DHB DoNs I have regular contact with have both undertaken to maintain and wherever possible increase the numbers of EN roles they have within their DHBs. I cannot comment about the private sector in this question.*

In some regions of the country, the role is integrated into the regional workforce and has flourished. The Enrolled Nurse is viewed as a valued health professional. Furthermore, in isolated regional centres, the Enrolled Nurse continues to be the backbone of the nursing workforce. A significant number are employed in the "T" rural hospitals of the Waikato District Health Board, e.g., Taumarunui and Te Kuiti Hospitals, albeit a number will be retiring soon. These rural communities are considered 'hard to staff' areas. The continued inclusion of the Enrolled Nurse role within the staffing matrix highlights the importance of the role within these regions. Furthermore, it offers opportunities for employment for the local community.

- *I am lucky; I get so much support from the nurses. Small rural hospitals offer great opportunities for learning – you can learn a lot.*

- *Luckily I work for the XDHB who have been one of the only health boards that have increased the use of ENs.*
- *I have an amazingly job in a large Rural GPs Practice. So, I see huge potential and with ENs managing practical functions in a health care setting, Ward, team or GP practice. Really grounds a good team together as the ENs take the pressure of jobs like stock and sterilising, really free up the RNs for care planning and management functions. E.g. we have robust triage system that the RN Team manage.*

Concerning rural inequities of service delivery, one participant outlined the advantages of ENs working in rural communities and as a team.

- *I think enrolled nurses are a huge part of a multidisciplinary team- they are a huge part of a health care team. And being out in the rural (area) they (people) don't have as much access to cost effective health …. Having an EN going out to do some home checks or doing a clinic with an RN or a doctor would make a huge difference as opposed to them having to travel in to the nearest GP practice.*

An article in the Nursing Review (Nursing Review, 2017) indicated mixed support throughout Aotearoa New Zealand on Enrolled Nurse employment. While stakeholders are supportive, employers are not as keen to include this level of nurse in the staffing matrix. It is clear from the findings of this research, however, that the tide is turning and the role of the Enrolled Nurse is becoming integral to healthcare in Aotearoa New Zealand. Several organisations are now embracing the Enrolled Nurse role and proactively employing them within their staffing matrix. Key employers have proactively integrated the Enrolled Nurse into their nursing matrix for some time now (over the last few years). They include Nurse Maude in Christchurch, Corrections Department in Auckland, and Tamahere Eventide and Te Kohao Health in Hamilton.

The Waikato District Health Board employed a significant number of Enrolled Nurses in 2018-2019 (approximately 19). This is a substantial increase and areas of employment have included Mental Health, Clinics and Acute and Rehab. Although noted in the NETS report to the Ministry of Health, less than a

third (29%) of EN graduates were in employment from the July State Finals in 2019 (Nurse Education in the Tertiary Sector, 2019).

The Safer Staffing Accord signed in July 2018, by the New Zealand Nurses Organisation (NZNO), District Health Boards and the Ministry of Health commits to ensuring there are enough nurses and midwives in our public hospitals for staff and patient safety (Ministry of Health, 2019a). The Accord explores options for employment and training for all New Zealand nursing and midwifery graduates develop accountability mechanisms to ensure District Health Boards implement additional staffing as identified by the CCDM and develop strategies for retention and re-employment of staff.

While several factors may have influenced the increase in employment of Enrolled Nurses, a significant impetus may well be the Safer Staffing Accord.

In 2019 nationwide discussion on staffing within residential care facilities also occurred. The “In Safe Hands” project clearly outlines the concerns of the industry with inadequate staffing, job satisfaction and worry about safe care delivery(New Zealand Nurses Organisation, 2019). In addition to this, The Aged Residential Care Funding Review was recently published (Ernst & Young, 2019). Of interest was the positioning of Enrolled Nurses within the report. Enrolled Nurses were included in the caregiver skills mix rather than being reported with the Registered Nurse or in their own right (p. 147), further confusing the scope of the role. While projections for future staffing levels are detailed, it does not give a clear indication for the Enrolled Nurse, despite residential care being an area designated for likely employment.

There appears at times, to be a misunderstanding of the Enrolled Nurse role. Alongside this is a lack of recognition and acknowledgement of the role. Competition with other non-regulated health roles also impacts on this.

5.4. Competition with Other Roles

In consideration of the responses from the survey participants, a theme identified is the competition between and the significant overlap of care roles within the sector.

One could surmise this stems from the 1980s historical change for the Enrolled Nurse role discussed previously. With the phasing out of the Enrolled Nurse, other roles have been utilised to fill this gap. Of note is the increase in non-regulated health care assistants and support workers who are employed within health services. Non-regulated workers are now carrying out duties and care that would once have been a nurse's domain. These skills include patient care, wound care, vital signs, medication administration, ECGs, team leadership, health education and health promotion and more complex care such as tracheostomy care and PEG feeding.

Enrolled Nurses have a specific skill set which has been eroded over time with the introduction of non-regulated health care staff. Initially, this may have been fiscally prudent for health care delivery, however, the recent pay increase, albeit it long overdue, now places the Enrolled Nurse at risk and further devalues their skills and knowledge. While non-regulated staff may be able to carry out tasks and skills, their lack of clinical understanding and decision making potentially poses a risk to health delivery. Some employers have established clear delineation between regulated and non-regulated staff, reducing the risk of this occurring. Other employers, such as care facilities may utilise non-regulated staff for these traditional nursing tasks.

- *The HCA is not a regulated scope of practice and therefore the legal responsibilities of HCAs and ENs are different. An HCA can only be held legally responsible for their actions. They can only be held accountable for injury under the crimes act. They cannot be held accountable for any professional results or poor standard of care delivery.... because no they are not a registered health professional, so that places enrolled nurses in quite a different position, because they are legally accountable for what they do within their scope of practice...*

  I think that the big thing that other health professionals don't understand is about the difference between ENs and HCAs. I think it is something that HCAs don't understand. I have seen some very poor examples of HCAs being used quite like ENs in recent years and especially in private providers residential care situations, where HCAs may be making decisions like which drugs to give when and doing assessments in a way that is considered within the registered nurse scope of practice.

I think, you know, there are real challenges' around that private care space outside the DHB and there is a temptation for ENs and others to be called in to doing stuff that probably requires the judgement of an RN. I think that is a scary place for people to be only the EN is at more risk. An HCA acting as a team leader for example can't be held accountable, and you can ask if they should be in that position. They can still be subject to a health and disability commission enquiry, and that would be a scary place for an HCA... when push comes to shove and something bad happens an employer is much better to have an EN. The employer takes more responsibility for an HCA because they can't take that professional responsibility themselves.

When considering the difference between Enrolled Nurses and Health Care Assistants, comments were as follows:

- *In our facility, not a huge difference when compared to Level 4 Senior HCA's but quite a significant difference if compared to a Level 0, 1, 2, 3 HCA.*

- *In the medical practice I'm still doing most of what RNs do right to the top of my scope so yeah I do quite a lot and a great deal more than a health care assistant, but it is just getting people to understand the difference between an enrolled nurse and a health care assistant".*

- *ENs differ from HCAs a lot ..... In terms of the expected knowledge base.... because they are a regulated workforce we have a much better understanding of their education and their expected knowledge base, with health care assistants that is incredibly variable, in terms of responsibility, the EN has a lot of responsibility, even though they don't have the ultimate responsibility they are expected to be able to interpret assessment rather than just report them for example..... It depends upon what role the enrolled nurses are given within that organisation.*

One participant succinctly summed up the difference.

- *The enrolled nurse has a scope of practice; they are a regulated workforce and enabled to work to the top of their scope of practice. All enrolled nurses know their scope of practice. The HCA's are an unregulated workforce and provide a support to the RN and EN, helping with bed sponges, mobilising a patient, doing ward tasks, HCA's have a position description not a scope of practice.*

In comparison, another participant's point of view highlighted the reality and complexity of staffing:

- *Enrolled nurses must adhere to their Code of Conduct and competencies. These along with their position description can and does limit their work functioning. In reality, depending on who they are employed by, their level of education (formal NZQA qualifications and what is provided by their employers) and if there are RNs or ENs present in their workforce HCAs can carry out a vast range of tasks unrestricted by Codes and competencies. HCAs can carry out non-nursing tasks and nursing tasks as directed. This makes them a highly flexible and versatile if not highly skilled workforce. HCAs do not legally have to be directed by an RN.*

Confusion between these two roles adds to the misunderstanding of the Enrolled Nurse scope of practice, particularly when compared with non-regulated staff.

In comparison with the Registered Nurse role, the lines appear less blurry with clear direction and delegation demarcation, teamwork and understanding of each other's role.

- *Personally, I think our roles are both very important and I think in many ways they are similar, for e.g. if my patient becomes unwell, I wish to continue looking after them but with the RN also, a team approach. My EN job is always to inform the RN of changes in our patients, although as an EN we do our own medication, and we can put up IV N/saline, and be*

second checkers for other IV ABs and fluids certified RNS need to be the one who admin the IV ABS or two RNs do PICC admin."

- *Registered Nurses provide Direction and Delegation to the enrolled nurse. The Enrolled nurse reports to the RN of any concerns they have with a patient. Most RN's I work with, trust me to contact the house officer or others re my concerns, I keep the RN informed and we discuss the nursing care etc., I usually keep the patient. The RN is supposed to take the complex patients, but I do get complex patients as I work on a busy heavy surgical ward. As enrolled nurses we do our own medications, IV fluids, unless an additive has to be added to the fluids, and then the RN will put the IV fluids, up. I have patients with PCA's, VAC's, drains, change the VAC dressings, sometimes these take two people anyway. Patients with CPAP, Airvo, RN administers the IV antibiotics. We do team nursing.*

- *Although the EN works under the direction and delegation of an RN the work load is the same and apart from some medication administration the role is quite similar. And of course, the pay scale. As an EN nurse the work has increased into if I dare say a mini RN roll but the pay does not reflect this.*

Implementation of the two roles may appear similar in some situations, however, the diagnostic reasoning and clinical decision making is significantly different.

- *With regard to difference between RNs and ENs. ...We need to differentiate between competence and capability here as well so you know if you look at the EN programme is it half the time of the RN and it is a level 4 and 5, so the difference between level 5 and level 7 when you think about diagnostic reasoning... it is very significant, if you think about the level of science that they do at EN level it is going to be around implementation of care rather than diagnostic reasoning. So those are the big differences capability and diagnostic reasoning ... and it is also in terms of accountability..... in terms of capability a RN is going to have a higher level of ability because an RN is not just entry to practice an RN may be mid-level in terms of capability or at a specialist level and the RN scope is really*

broad and has a huge depth to it. So if you want to take an EN and compare them to a new graduate, the EN has some degree of experience and might not look to be a lot of difference but in terms of capability there is a huge difference.

- *It's all around the definition of direction and delegation. People's understanding of that term varies and people's understanding of the Enrolled Nurse role varies.*

Misunderstanding of the Enrolled Nurse Scope of Practice, regional and employer variation on what an Enrolled Nurse can do, and role competition with non-regulated staff points towards the need for the Enrolled Nurse to be re-positioned within the nursing workforce. While this is not a focus of this research, it is undoubtedly an area for further review and development.

- *I'm a nurse, RN or EN or not, I am a nurse, I'm living my passion, loving it, helping people, doing what I love, and I am good at it.*

5.5. Pay Parity/Disparity

A significant factor that has impacted on the Enrolled Nurse was the pay equity settlement for Health Care Assistants.

As highlighted earlier, many survey participants were supportive of the landmark pay increase for Health Care Assistants. However, this has impacted on Enrolled Nurse remuneration, with Health Care Assistants being paid more than an Enrolled Nurse in some cases.

Alongside the concerns raised regarding scope of practice, employment and regional variances and role competition, the pay equity settlement creates a significant division between these two valued members of the workforce.

- *Pay equity has been long overdue, however this has not translated well for the EN's resulting in HCA's now earning more than the EN's in some cases.*

- *A great deal, especially in aged care where the HCA got pay equity. I have heard that some EN's changed over to HCA. But NZNO and ETu have been doing some great work in regard to this when collective contracts come up, especially with some of the big corporate owned facilities in NZ. A few of these have been accepting of this and have been giving substantial pay increases to EN's and the RN's within these facilities. It's the smaller family owned aged care facilities that can't meet the pay equity payments and changed the title of the HCA's to home assistants!!! Waiting for pay equity in the DHB's and hopefully delivers for EN's. I as an enrolled nurse believe that we are worth more than our current hourly rate. A new step 4 for enrolled nurses in DHB's was introduced on the 6th May 2019 and brings the EN rate up to $26.22 approx. per hour. Another 3% wage increase due in August 2019, which will be just over $27.00 per hour.*

- *Pay equity changes with HCAs.... we have a qualification, and I'm not putting down HCAs as they have worked hard for their qualification.... but it doesn't recognise that we have a higher qualification, to see an HCA getting more than you, it's a kick in the teeth at times.... They deserve it, they work so hard... but I've seen some ENs give up.... we come under the review of the Nursing Council if something goes wrong and they don't, why put yourself through that, you might as well go down a grade and still get better money.*

Progress has been made in pay negotiations with many of the larger employers (residential care organisations) providing a pay increase and pay parity with District Health Boards for their regulated nursing workforce. These corporations have increased hourly rates for both Registered and Enrolled Nurses.

- *I have friends, both RNs and ENs who work in aged care and their employer has given them a raise at the same time so there has been less of an impact (with the HCA pay equity claim).*

In addition to this, wage negotiations between NZNO and District Health Board created a confusing picture in 2018, resulting in strike action by nursing staff. The final settlement between the two parties resulted in the District Health Board and New Zealand Nurses Organisation Multi-Employer Collective Agreement (MECA) 2018/2020. The MECA sets the remuneration rates for nursing and midwifery staff in New Zealand District Health Boards. Of interest is the separate note about Enrolled Nurses. The MECA acknowledges the special significance of the Enrolled Nurse scope of practice. It stated the role was "distinct from that of Registered Nurse and Health Care Assistant / Hospital Aide" (p. 100). The DHBs have agreed to promote the employment of Enrolled Nurses by ensuring these positions remain a valid and integral part of the nursing care team, according to their scope of practice (New Zealand Nurses Organisation, 2018a, p.100).

I reviewed the MECA and noted a Step 4 Enrolled Nurse receives $27.42 per hour. A Step 5 Health Care Assistant receives $23.07 per hour. A Step 1 Enrolled Nurse receives $23.38 per hour, and a Step 1 Health Care Assistant receives $19.41 per hour. These figures are for August 2019 (p.17).

The Ministry of Health guidelines on the Pay Equity Settlement shows the equivalency of a Level 4 support worker/12 years of service, as at 1st July 2019 to be earning $25.50 per hour (to increase to $27.00 by July 2021) (Ministry of Health, n.d.).

While constraints and factors influence these rates, such as length of service and qualifications, in comparison with the DHB rates, a Step 4 Enrolled Nurse only earns $1.92 (approx.) more than a Level 4 Health Care Assistant. This is significant due to the training and qualifications of the two distinct roles.

It is assumed the MECA will be reviewed again within the 2021 timeframe, however, if minimal gains within the MECA are seen, a Step 4 Enrolled Nurse in 2021 may earn 0.42cents more than a Level 4 Health Care Assistant.

It is also important to note that pay rates vary with employers. An anecdotal situation relayed to me was an Enrolled Nurse who had over 30 years of experience and had moved regions and employers. They were now paid $4 less than Health Care Assistants.

Comments from the survey participants have outlined concerns with this disparity and questioned the need to train and have the added responsibilities and student debt.

- *Why do EN training when HCAs earn just as much?*
- *Not exactly an incentive to train as an EN and have all the responsibilities of a registered health professional when there is little difference in pay with HCAs. Remunerate ENs accordingly, ensure DHBs employ more ENs before churning out more new grads and add a step 5 to the pay scale.*
- *A few enrolled nurses would prefer to work as an HCA, no responsibilities.*

Contributing further to this confusing picture, a Level 5 Health Care Assistant Certificate is also available - Diploma in Aged Care and Disability Practice (Level 5). The outcome of undertaking this qualification is expected to be "a management role in the aged care and disability sector, which is a very fast-growing sector in New Zealand and developed countries." Topics covered include person-centred approaches to support people with complex needs, dementia support and care, medical conditions and their impact (Ignite Colleges, n.d.). Pay rate for this qualification is $25.50.

What is concerning is the promotion of study for non-regulated health care assistants with the promise of a managerial role within a highly complex industry.

In summary, confusion with the scope of practice, role competition, and regional and employer variances and pay parity impacts on the Enrolled Nurse. These factors hinder the nurse from working to the top of their scope and receive appropriate remuneration and recognition.

It is therefore imperative that the lack of national standards or employment consistency for this regulated health professional be recognised as contributing to the disparity in the sector.

5.6. Education and progression

The NZNO document 2020 and Beyond: A Vision for Nursing (New Zealand Nurses Organisation, 2011, p.13) stated as early as 2011 that "Enrolled nurses will have access to professional development and post enrolment education that ensures they can meet the needs of the people they nurse. Enrolled nurses will also be formally recognised for the post enrolment education they undertake," (p. 13).

While there has been some progress and movement with this since 2011, it was still an area highlighted as a concern in participant comments. They detailed the lack of education or ability to progress in their chosen career.

It is important to delineate between these topics as they are significantly different.

The Enrolled Nurse 18-month training covers four focused areas, including residential/long term care, rehabilitation, acute and mental health. This allows Enrolled Nurses to work in a variety of areas but is dependent upon the individual employer. Some Enrolled Nurses are highly adept within their field and have garnered this knowledge and skills over several years.

- *That 18 months of learning was phenomenal, I just loved it.*
- *Many of the older ENs have developed their knowledge over many years of working and are mines of information. Some, as with RNs, are not.*

Research participants stated a lack of career progression and difficulty with further training. It is important to note, though, that the Enrolled Nurse scope of practice does not inhibit this ongoing professional development from occurring. Professional development requirements set by the Nursing Council of New Zealand for the Annual Practicing Certificate stipulates 60 hours over three years. Completing these hours is mostly left to each nurse; however, as discussed by the Nursing Council, it must include more than the mandatory or core training offered by employers (Nursing Council of New Zealand, n.d.)

Participants noted, however, there was a lack of suitable courses available:

- *The limitations come down to the amount of study for us. Now things are opening up for ENS, e.g.: ENs can now do inter-Rai, I think the study is just not there.... EN preceptorship is not available, and why not, there are ENs out that need to be looked after by us.*
- *Lack of courses to further knowledge*
- *Lack of visibility and ongoing training of E/N. Scope not well understood or acknowledged.*
- *The opportunities are there if you want to take the time to reach out and do more education.*

The New Zealand Nurses Organisation Enrolled Nurse section in the Waikato holds workshops, conferences and makes information available to its local members of training opportunities. Other training can be accessed via Ko Awatea or international websites, such as the MOOC package, for example, the University of Tasmania course on Dementia (University of Tasmania, 2020).

Enrolled Nurses can specialise in their field provided it sits within the current scope of practice for an Enrolled Nurse, and the role is relevant to the employer's staffing matrix or requirements. An Enrolled Nurse, for example, can work in an acute area within a team environment. The Enrolled Nurse can co-ordinate a team of Health Care Assistants and can work in other settings under the direction and delegation of another health professional.

Further education can be completed and is role-specific. For example, within a GP practice, Enrolled Nurses can complete Cervical Smear Taking and Vaccinator Certification training.

- *You know how RNs can do post graduate, ENs need an opportunity to do that too – I'd love to do something like that.... extend my knowledge ... maybe a Certificate in Rehab or Elderly Care ... gain theoretical knowledge – I am more than happy being an EN, I am doing as much as I want to.*

A potential area of development could be increasing the visibility of training courses for Enrolled Nursing.

The limitation of the Enrolled Nurse to progress in their career may centre upon the broader understanding of their scope.

- *To be given more autonomy in certain areas of nursing, some organisations have their own what EN can/cannot do policies.*
- *EN's being able to practise to their full potential and still within their scope of practice due to a poor understanding of their scope by employers.*

The ability of the Enrolled Nurse to work to the top of their scope or progress may further be limited by their role structure within their employed organisation.

Opportunities are available for further training and professional development. However, progression the same as Registered Nurses will not occur due to the constraint of their initial training.

5.7. Support Needed for the Role

A theme woven through the participant's narratives is the need for greater support for the Enrolled Nurse role. Components of this theme were financial remuneration, ability to work to the top of their scope, opportunities for employment and general recognition of their training.

During the data collection, conversations occurred with employers who are actively involved in the recruitment, support and retention of the Enrolled Nurse within their organisation. From these discussions, it is apparent a solid orientation, on-going professional development and day to day endorsement of the role are the keys to the successful integration of the Enrolled Nurse role.

- *I really love my job, they are always working with me to make sure I feel ok with my wage scale, with my job role... from my CEO recognising the work that I am doing... they are all amazing... support from top to bottom.*
- *.... I cover four areas.... I am involved in assessment and planning.... I am part of the process of evaluation.... my doctors respect me... encouraging patients to ring me if there are any concerns...*

- *I know the area well I know the doctors in the speciality area, our main responsibility here is to make sure the patient journey is as smooth as it can be... we work together well... I love it here...*

A proactive stance to include the role within their staffing matrix has allowed the role to flourish in several organisations. For example, Nurse Maude in Christchurch and the Corrections Department in Auckland have incorporated the role within their nurse-led team. The Mental Health Services for Older People inpatient ward and the Meade Clinical Centre within the Waikato Hospital have also actively recruited Enrolled Nurses. Te Kohao Health, Hamilton, has Enrolled Nurses in their practice nurse team and Tamahere Eventide, Hamilton incorporated the role within their nursing workforce.

The Professional Development Unit of Waikato Hospital has introduced an orientation programme for all Enrolled Nurses and with a specific focus on new graduates. A national orientation framework is in development for Enrolled Nurses. It is important to note that a proposal called Enrolled Nurse Supported-into Practice Programme (ENSIPP) has called for funding and support for an appropriate entry to practice programme for graduating Enrolled Nurses since 2014 (New Zealand Nurses Organisation Enrolled Nurse Section, 2014).

A recent development from the Ministry of Health has seen the Bonding Scheme for Health Professionals extended to Enrolled Nurses working within the area of mental health and addictions (Ministry of Health, 2020b).

A new ACE training programme is to be introduced to support Enrolled Nurse graduates. The Office of the Chief Nursing Officer confirmed in August 2019 that $24.52 million of funding over four years from the 2019 Budget had been expressly set aside for transition to practice programmes for all new graduate Registered and Enrolled Nurses. This aims to support safe staffing, recruitment and retention and employment of nurses. The Advanced Choice of Employment (ACE) process supports nurses in their first year of practice (Ministry of Health, 2019b).

This is a significant step for Enrolled Nurses. What is noteworthy, though, is this process has been available for several years for Registered Nurses. The new training for Enrolled Nurses commenced ten years ago. The question is, why has it taken ten years for this to occur?

Chapter 6. Research Outcomes

The findings of the study provide insight and clarity for the 'wicked problems' identified at the onset of the research journey.

Throughout the research project, is it apparent that the Enrolled Nursing workforce is a proud and passionate nursing group despite the difficulties they experience. This was evident in the comments shared in the survey, one on one interviews, and from opportunities I had to meet with Enrolled Nurses in a variety of capacities. It is important to note many Enrolled Nurses work to the top of their scope and feel well supported in their role and as valued team members. However, many feel they are not, and challenges that occur for these nurses include being able to work to the top of their scope and abilities, fair remuneration for their skills and qualifications and better employment opportunities.

The stakeholders who participated in the research actively support the role of the Enrolled Nurse within their clinical setting and are keen to expand where possible.

Participants of the research were further asked what the challenges and opportunities were for Enrolled Nursing in Aotearoa New Zealand.

Responses were reviewed and summarised as follows:

6.1. Challenges

- Need for acceptance of the Enrolled Nurse role within the health workforce
- Lack of understanding of the scope of practice by other health professionals in some clinical settings
- Regional and employer inconsistencies with the Enrolled Nurse role
- Proactive workforce involvement in some regions and minimal to none in others

- Enrolled Nurses are unable to work to the top of their scope in some clinical settings, have limitations on their role or not employed
- Competition with other care roles and remuneration, specifically non-regulated workforce
- Training and ongoing professional development needs not met or require clarity and more opportunities

  - *A lot of the challenges around the how direction and delegation is interpreted, RNs understanding the scope of practice of the ENs.... challenges in terms of salary, especially in aged care with HCAs now earning the same as an EN so there are challenges in getting people into the profession and there is not the same financial reward..... and horizontal violence that has plagued nursing for its entire history between certain groups and ENs fall into that.*

6.2. Opportunities

- For Enrolled Nurses to be enabled to work to the top of the scope of practice
- For Enrolled Nurses to be considered for employment in other areas of health other than traditional sectors such as hospital and residential care settings
- For Enrolled Nurses to be actively included in the nursing matrix
- For Enrolled Nurses to be seen and acknowledged as valued members of the nursing team for their skills and knowledge
- To raise awareness of the Enrolled Nurse role, contribution and abilities and scope of practice
- To consider mentorship opportunities for new ENs from older ENs
- Fiscal advantages to employing a regulated health professional

- *Over time when we become more appreciated for what we are and what we do our opportunities will grow.*

- *I would like to see more ENs working in the aged care sector. I would much rather see ENs employed and leading teams of health care assistants in aged care than HCAs being stepped up to these roles .. I think there are real risks.... sometimes those team managers are not only leading ENs but RNs . I would like to see some ENs replacing HCAs. As the aged care sector is taking on more responsibility for palliative care, for care of people with long term conditions, the care of people in aged care is becoming more complex therefore I think we need to get more ENs employed in that area with good RN support and leadership. So I think that aged care is the next big opportunity for ENs to make their mark. And in terms of primary health care more opportunities are out there but they need to be carefully articulated into teams. Who knows what will happen in primary care around nurse practitioners leading health services and nursing teams, and then the team might start to look a little different in primary care.*
- *There are more opportunities for ENs in the community, I think they could work in general practice as part of the team with RNs, with Māori health providers, ENs would have a huge role there..... ENs here in x region have a huge role in district nursing and they work within a very tight team with RNs but also work independently.... in operating theatre and in paediatrics here in x region.... had a number of ENs, they were amazing and kept the whole place together.*

In some regions, there are proactive developments and inclusion of the Enrolled Nursing role in Aotearoa New Zealand. The list below is not exhaustive and other areas also support Enrolled Nurses. Examples of providers who include Enrolled Nurses in their model of care appear below:

- Mental Health Services for Older People (OPR1), Waikato DHB
- Meade Clinical Centre, Waikato DHB

- Henry Rongomau Bennett, Waikato DHB
- Support of Enrolled Nurses and students with the Dedicated Education Units at Waikato Hospital, Professional Development Unit, Waikato DHB
- Te Kohao Health, Hamilton
- Tamahere Eventide, Hamilton
- Rural Hospitals, Waikato
- Department of Corrections, Auckland facilities
- Nurse Maude, Canterbury, Wellington and Hutt, Nelson Marlborough
- Canterbury and Otago DHBs

An example of the support and inclusivity for Enrolled Nurses within the nursing matrix is seen with The Nurse Maude Project in Canterbury (known as Total Care). This project utilises the skills and knowledge of Enrolled Nurses and has done so since 2011. Evaluation indicates the Total Care Service has achieved the following outcomes:

• reduced attendance at emergency departments

• reduced hospital admissions

• reduced length of hospital stay

• improved efficiency (e.g., effective use of staff time and better management of a person's medication)

• High patient and family satisfaction with the quality of care

The Enrolled Nurses are well supported into practice by Registered Nurses and mentored by the Enrolled Nurses already employed.

6.3. Implications of this research

This research tells the story from the voices of our nursing workforce, in particular, the Enrolled Nurses of Aotearoa New Zealand. Many of these themes are not new and have been highlighted previously in publications and research (Gibson & Heartfield, 2005a; Martin, 2017; New Zealand Nurses Organisation Enrolled Nurse Section, 2016; Nursing Review, 2017a; New Zealand Nurses Organisation, 2018b). Of importance also to note, is the progress that has been made over the past two years in particular with the development of a national Enrolled Nurse orientation programme, supported transition programmes and increased employment within the Waikato Tainui region.

What is important for this research is the strong narrative that shared throughout the project. Enrolled Nurses are a proud and passionate workforce who, at times, feel the need to stand up for themselves and explain what they can do, their worth, and contribution to the nursing team. The research has highlighted areas of concern as well as positive examples of the value of Enrolled Nurses.

Using the transdisciplinary approach for this project has meant a variety of voices are heard, and people have gathered around 'the table' to share their viewpoints. Individual world views and reflection has been shared amongst participants alongside ideas, practices, policies and concerns. The research findings have identified areas for further research and potential innovations.

The position of Enrolled Nursing within Aotearoa New Zealand must be considered. Enrolled Nurses have a unique and differentiable position within the nursing workforce. As Registered Nurse roles change, this will have an impact on the role of the Enrolled Nurse. This is apparent in the following interview transcript.

Interviewee:

- *RNs are moving ... medicine is becoming more and more specialist, they are going to have to get more and more specialist, they are going to have to have skills around genetics, for example in order to prescribe in the future ... . I think the other thing to remember is that the legislation has freed up the language, it requires a suitably qualified health practitioner ,*

rather than a medical practitioner, that is a leap, so that has significance on the whole scope of nursing practice at all levels...

- *I think another thing to think about in relation to ENs, RNs within their scope of practice and doing more and more. If you look at the top level, advanced practice is still within the RN scope of practice, and then you have people who are prescribing. We are going to have community prescribing, designated prescribing, and then we will have delegated prescribing. And there are other things they are doing within their scope, they are leading not only nurse-led clinics, they are case managers, they are having scope of practice endorsements to do things like endoscopy roles.... there is a lot of potential for RNs to grow, so what is that going to mean for ENs?*

Researcher:

- *Is there a space for ENs?*

Interviewee:-

- *I see it, I absolutely see it. And once again I think we have to think about the risk of using HCAs, of over using HCAs. There is a professional risk, there is a legal risk, there is a public safety risk and I think those risk narratives are a good way to construct a space for ENs.*

- *Something else to think about ... if the key element of the RNs practice is diagnostic reasoning, then is the EN the repository for the care skills? I think about the practical nursing care, you know the skills set where you can take a person in pain and position them in a bed in a way that relieves their pain and maybe that is the EN specialist knowledge.*

The findings of this study have led to innovations that could well impact the sector Furthermore, areas for further investigation are considered. These are discussed in the following chapter.

Chapter 7. Proposed Interventions for Change

The following innovations are from the findings of the research project. Further development of these initial ideas are required. However, stakeholders who were part of this study are supportive and would like to be part of future investigations. The identified interventions may form an evolving baseline for the development and refinement of a unique Enrolled Nurse role to address health care needs in Aotearoa New Zealand.

7.1. Establishing a Community of Practice

There is an excellent opportunity to establish a community of practice for Enrolled Nursing within Aotearoa New Zealand. Lave and Wenger (1991) discussed a community of practice as a group with a common interest in a particular area and shared knowledge and experiences. This has undoubtedly occurred during the research. Stakeholders are interested and enthusiastic to continue to share this co-creative space. A community of practice will unite people and organisations key to the development, training and support of Enrolled Nursing. It would support future innovations, sharing of ideas and provide a cohesive approach to supporting Enrolled Nurses within the workforce.

7.2. Employment Models/Mentors

A potential area for development is the role of employers in the successful employment and support of Enrolled Nurses. Employment is more than filling a vacancy. Points for consideration are:

- the role of Enrolled Nurses within the model of care delivery of the organisation,
- knowledge of the scope of practice and the ability for the Enrolled Nurse to work to the top of this,
- a supportive orientation programme,
- on-going professional development opportunities,
- financial advantages of employing regulated staff.

Positive employer role models exist throughout Aotearoa New Zealand. Stakeholders within this research have agreed in principle to be mentors for

other employers. While this concept requires further research and discussion, it is a starting point to share ideas and viewpoints. It may develop into a resource for those wishing to know more or considering employing enrolled nurses.

Continued development and full implementation as well as nationwide dissemination for the nurse entry to practice orientation programme is also needed.

7.3. Raising Awareness of the Enrolled Nurse Scope of Practice

A potential area of innovation is raising awareness of the Enrolled Nurse scope of practice. Literature and resources are readily available for review, such as publications from the Nursing Council of New Zealand (Nursing Council of New Zealand, 2019c). Still, a more practical and contemporary approach is required utilising successful employers and showcasing Enrolled Nurses in practice. This may take the form of social media items, videos and contemporary case scenarios.

Raising awareness of Enrolled Nurses and their scope of practice has been promoted as a strategy by NZNO for their 2018-2023 plans. Multi-sectorial input from various stakeholders is needed to promote the value of the Enrolled Nurse, including financial and workforce benefits and interdisciplinary knowledge.

7.4. Inter-professional development

An additional area of innovation is the integration of inter-professional development within nursing education. The Centre for Health and Social Practice (CHASP) at Wintec, Hamilton offers programmes for various health disciplines: nursing, social work, counselling, physiotherapy and the occupational therapy programme offered by Otago Polytechnic. Sharing teaching across these disciplines and incorporating exposure to other health disciplines during learning is an area for further research and investigation. Initial discussions within CHASP and the wider Enrolled Nursing tertiary providers group have highlighted areas for development.

Aspects could include:

- continued focus to incorporate inter-professionalism within tertiary providers and in particular raising the profile and understanding of the Enrolled Nurse role and scope of practice
- combined teaching and collaborative learning of topics relevant to all programmes
- sharing of ideas and resources
- continued development of the Dedicated Education Unit model of learning and incorporating students of other disciplines within this model. A Dedicated Education Unit is a philosophy of learning support for students. The DEU provides increased clinical and academic support, embedding the student within the clinical area. The DEU promotes collegial relationships between students, nursing staff and clinical lecturers (Ara Institute of Canterbury, 2020).

The tertiary providers of Enrolled Nursing education are supportive and keen to be part of further innovations to support the Enrolled Nurse role.

7.5. Professional development opportunities available for Enrolled Nurses

The establishment of a national database for professional development opportunities is an initiative to support Enrolled Nurses. Ideally, this would be website based and access available for nurses and employers. It could also be a forum to advertise workshops and conferences as well. Professional development is a requirement for all nurses, and a review of tertiary provider courses appropriate for Enrolled Nursing is timely. Ongoing professional development opportunities may include, but not limited to, courses in speciality areas.

7.6. Enrolled Nurse training

As part of the research discussion with stakeholders in rural areas of Waikato Tainui, the availability of Enrolled Nurse education has been raised. It is acknowledged that training is within the Hamilton area. This does not suit students from outlying regions, particularly those students with families and work commitments in their local communities. Discussion with rural providers is encouraging, and the Centre for Health and Social Practice in collaboration with these providers are developing a sustainable learning option for rural communities. There is potential for students to 'earn and learn' in their own rural communities. This can provide learning and employment opportunities, help to staff 'hard to staff' areas, and possibly reduce barriers to engaging in education for potential students. Retiring Enrolled Nurses within these areas could provide a mentorship role to new graduates and assist with their transition into the workforce.

Iwi providers have raised the idea of a regional Hui to consider this further. While the Enrolled Nurse role is not the sole answer for rural inequities and health disparities, it may be part of a broader solution and a starting point for discussion. It may also provide education and employment opportunities within Iwi and help support Iwi health providers in care delivery. This is a crucial area for further research.

7.7. Remuneration and Employment Opportunities

Competition with other health roles, remuneration and employment are significant areas of concern for Enrolled Nurses. As shown by research findings, regional and employer inconsistencies exist on the utilisation of the Enrolled Nurse role. Nationwide discussion is required to address these issues and is a topic for further research by a transdisciplinary stakeholder team. I do not wish to pre-empt potential innovative outcomes, however, national consistency and integration of the Enrolled Nurse role into health delivery and models of care require further attention. There is the potential for specific inclusion of the Enrolled Nurse role into standards and funding contracts, for example, safe

staffing in residential care facilities and the Aged Residential Care Contract held with District Health Boards (Ministry of Health, 2020a).

The innovations discussed will require the input from a variety of stakeholders, including the nursing workforce, education providers, health services, employers, support organisations and regulatory bodies. The innovations may change and develop with input from these groups. However, a community of practice approach would ensure consistency and a cohesive approach to supporting the Enrolled Nurse role within Aotearoa New Zealand.

Personal Reflection

My journey from humble, and perhaps, naive beginnings to now has taken over three years. Initially, I asked myself why Enrolled Nurse graduates were struggling to be employed and why senior nurses questioned the point of training as an Enrolled Nurse. I knew it was more than just having a vacancy, but surely it wasn't that difficult to incorporate the role into the workforce. We used to do it. Perhaps I was stuck in the 'what we used to do' as opposed to 'how it is now' state!

I have utilised the Gibbs's reflective cycle (Gibbs, 1988) as a guide to contemplate my learning throughout the study.

Although I have been involved in research before, I probably didn't fully appreciate the practical aspects of this scale of endeavour. Still there is nothing like experience to turn an 'arm-chair' theorist into an active participant with a practical understanding and appreciation of what is involved. It really has been a voyage of discovery and enlightenment. My initial discovery came with the Literature Reviews where I developed a keener sense of understanding and had to put the mahi (work) into finding out the history, theory and contemporary aspects of what was required to study this topic. I had a good idea about the 'what' but needed to hone my thinking more about the 'why' behind the situation to springboard into a fully-fledged piece of research.

Putting the research into action was a case of wondering where to begin and how does one go about those practical aspects such as ethics, developing questions, best practice for research and further reflection. I felt very dithery at times and somewhat frustrated with my lack of knowledge of the process. Once underway though I was buoyed by the momentum and enthusiasm of others including my colleagues, stakeholders who were interested in the topic and also my fellow researchers and long-suffering supervisors whose patience was endless!!

I have learnt some invaluable lessons and no part of the experience could be termed bad – I am a great believer that we learn regardless of the situation. Perhaps if I did this again, I would be more timely, more confident and have a greater sense of self!

I have been humbled by the outpouring of emotions from nurses who have lived this experience, as opposed to myself, who has sat on the sidelines watching this unfold. I feel in part, that I am the narrator, curator and writer of a story that belongs to others. I hope that I have told the story well enough so that others' voices can be heard above the din of politics, policies, finances and phrases such as 'models of care', and scope of practice'.

I am now able to see the complexity of the situation for these Nurses within the Aotearoa New Zealand health workforce in glorious technicolour. Is it about having a scope of practice, or, is it about having the opportunity to work to the best of your ability and to the top of what you can do? Is it about 'under the direction and delegation' of another health professional, or, is it 'in collaboration with colleagues'? Is it about opportunities to just have a job, or, to be a valued and visible member of a health team? Is it about fighting for a space in the health team, or, is it about having one reserved for you? Is it about continued health inequalities, or, is it about making a difference for my whānau and iwi?

Nursing and the complexity of patient care and health service delivery changes daily. The Aotearoa New Zealand health workforce must adapt to keep aligned with population needs. As Registered Nurse roles change and evolve to support this, so must Enrolled Nursing change and evolve too. It is not acceptable to rely on the non-regulated workforce to support our most vulnerable and complex patients, and we must consider new ways to care and deliver services.

I have endeavoured to honour the invaluable contribution of all participants within this research, and I wish to give thanks for their time, passion and willingness to share their personal thoughts. Many words and phrases from participants have resonated with me throughout this journey. I am reminded of the words by Catherine Kohler Riessman "an utterance carries the traces of other utterances, past and present, as words carry history on their backs" (Reissman, 2008, p.107).

In moving forward, let us not forget what has gone before, but use this as a foundation for tomorrow. "Kia whakatōmuri te haere whakamua – I walk backwards into the future with my eyes fixed on the past" (Rameka, 2016).

Conclusion

The Enrolled Nurse sector of nursing in Aotearoa New Zealand is a proud and passionate workforce. It is aptly supported and promoted by the NZNO Enrolled Nurse section and the executive committee. While significant progress has been made to reintegrate the Enrolled Nurse back into the health workforce, important issues are raised in this research. These concerns are highlighted in the themes discussed: historical hurt and devaluing of the role, confusion of the scope of practice, regional and employer differences, competition with other health roles for employment and remuneration, progression and professional development opportunities and general support of the role.

This research has utilised transdisciplinary research methodology alongside a mixed-method approach for data collection to investigate the utilisation of the Enrolled Nurse role primarily within the Waikato Tainui region, but with a nationwide flavour. Further information has been incorporated from other areas and has provided a broader understanding of the issues.

Stakeholders and employers who utilise this role are identified in this research. They are supportive of participating in future developments. Critical areas for innovation and further research are acknowledged as part of this project, and they provide a solid foundation for ongoing development, research and innovation.

In conclusion, the positioning of the Enrolled Nurse within the Aotearoa New Zealand nursing workforce is crucial, particularly as Registered Nurse roles change, population needs grow, and care becomes more complex. The Enrolled Nurse is in an ideal position to support the nursing team, provide specialist nursing care and have a broader contribution in a more diverse range of care delivery models and environments. The delineation between regulated and non-regulated health workforce is needed.

There is a unique and differentiable role for the Enrolled Nurse in the structure of patient care within the Aotearoa New Zealand nursing and health workforce. Steps to further enhance and embed the Enrolled Nurse role are identified in this research using a transdisciplinary approach for co-creation and to formulate a shared understanding of pain points and a positive narrative for change.

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Appendices

Appendix I Questionnaire Questions

Q1 Qualtrics survey consent form

Q2 What is your age range?

- Under 18
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 - 74
- 75 - 80

Q3 What is your nursing scope of practice?

- Enrolled Nurse
- Registered Nurse
- Nurse Practitioner
- Other (Please explain)

Q4 Length of time that you have practiced as a nurse?

- Less than 5 years
- 5 - 10 years
- 11- 15 years
- More than 15 years

Q5 Are you an internationally qualified nurse?

- Yes
- No

Q6 In which country did you gain your nursing qualification? (Dropdown Menu)

▼ Afghanistan (1) ... Zimbabwe (1357)

Q7 Which is your primary ethnicity?

- New Zealand European
- Māori
- Cook Island Māori
- Samoan
- Tongan
- Niuean
- Chinese
- Indian
- Other _____

Q8 What is your current employment position?

- Health Care Assistant
- Enrolled Nurse
- Registered Nurse
- Nurse Practitioner
- Education
- Management
- Other _____

Q9 Which statement best describes your current employment status?

- Employed full time
- Employed part time
- Unemployed looking for work
- Unemployed not looking for work
- Retired
- Student
- Please comment

Q10 What type of workplace are you currently employed at?

- Aged Residential Care Facility
- District Health Board
- Private Health Service Provider
- Education Provider
- Māori Health Service Provider
- PHO
- Not employed
- Other _____

Q11 What region of New Zealand do you work in?

- Northland
- Auckland
- Waikato
- Bay of Plenty
- Gisborne
- Hawke's Bay
- Taranaki
- Manawatu/Wanganui
- Wellington
- Tasman
- Nelson

- Marlborough
- West Coast
- Canterbury
- Otago
- Southland

Q12 In your immediate work setting, (e.g.: ward, facility) how many Registered Nurses are employed?

- 1-4
- 5-9
- 10-19
- 20-49
- Identify approximate number

Q13 In your immediate work setting, (e.g.: ward, facility) how many Enrolled Nurses are employed?

- None
- 1-4
- 5-9
- 10-19
- 20-49
- Identify approximate number

_____

Q14 To your knowledge are Enrolled Nurses involved in the following:

	Most of the time	Some of the time	None of the time
Assessments and care planning			
Implementation and evaluation of care for health consumers and/or families/whanau			
Activities of daily living, observe changes in health consumers' conditions			
Co-ordinate a team of Health Care Assistants			
Medication management			

Q15 How would you rate your knowledge of the Enrolled Nurse Scope of Practice?

- Excellent knowledge
- Very good knowledge
- Good knowledge
- Poor knowledge
- No knowledge

Q16

In your opinion, what is the general understanding of the Enrolled Nurse role by other health professionals?

- Excellent understanding
- Very good understanding
- Good understanding
- Poor understanding
- No understanding
- Please comment

Q17

How does the Enrolled Nurse role differ from the Health Care Assistant role? Please choose the option closest to your opinion.

- A great deal
- A lot
- A moderate amount
- A little
- None at all
- Please provide further details or examples

Q18 How does the Enrolled Nurse role differ from the Registered Nurse role? Please choose the option closest to your opinion.

- A great deal
- A lot
- A moderate amount
- A little
- None at all
- Please provide further details or examples

Q19 What opportunities do you see for Enrolled Nurses in healthcare?

- Please comment
  _____

Q20 What challenges do you see for Enrolled Nurses in healthcare?

- Please Comment
  _____

Q21
How do you think the recent pay equity changes for Health Care Assistants has affected the role of the Enrolled Nurse?

- A great deal
- A lot
- A moderate amount
- A little
- None at all
- I don't know
- Please comment

Q22 What is your understanding of employment opportunities for Enrolled Nurses in your region?

- A high number of vacancies
- A moderate number of vacancies
- A few vacancies
- No vacancies
- Please provide further details or examples

Q23 Working within the Enrolled Nurse scope of practice, what settings could an Enrolled Nurse be employed in?

- District Health Boards
- Residential Care Facilities
- Primary Health
- Local Iwi health providers
- Rural health teams
- Health promotion
- Prison facilities
- GP Practices
- Other _____

Appendix II Wintec Ethics Approval

Waikato Institute of Technology
Research and Postgraduate Office
D Block, Tristram Street / Private Bag 3036
Hamilton 3240
e-mail research@wintec.ac.nz
Telephone 07 834 8800 Extn 3582

9 January 2019

Centre for Health and Social Practice
Morg Mackenzie

Dear Morag,

HUMAN ETHICS RESEARCH APPLICATION

Title: Developing the role of the Enrolled Nurse in the Waikato region

Thank you for your updated application which was considered by the Human Ethics in Research Group on 7 January 2019. I am pleased to advise you that ethics approval for your project has been granted until 31 December 2019 or until the project has been completed, whichever comes first.

Please note that should there be any changes to the approved research project then it will need to be referred back to the committee for further consideration.

The Human Ethics in Research Group wishes you every success with this project.

Kind regards

Megan Allardice
pp Elizabeth Bang
Chairperson
Wintec Human Ethics in Research Group

C.c. Tracey Hooker, Supervisor.

Appendix III Waikato DHB Approval of Research

RD019004	**The Role of the Enrolled Nurse within the Waikato Region**

Project Personnel

Principal Investigator:	Morag MacKenzie Wintec (Staff member and current student) moragm@xtra.co.nz 07 834 8800 ext. 3630 / 0274037589
Waikato DHB named investigators:	
Primary contact name and contact details (email and phone):	Morag MacKenzie

Date Submitted:	17/1/19
Type of Project:	Other
Multisite?	Not a multi-centre project
Department:	Nursing
Service:	Nursing & Midwifery
% of Māori with condition of interest	Unknown
What are your plans for recruiting Māori?	Researcher will attempt to include Māori participants in focus groups and individual interviews where practicable.
Is ethnicity a variable in your study?(Māori c.f. non-Māori)	Yes
Will your study involve collecting tissue samples?	No
Will you expect to publish your results?	Yes
Finance/Resource Requirements: (e.g. staff time, extra clinics, extra procedures, consumables)	Staff time for survey, focus group discussion and individual interviews.

Project Description (300 words max – background, aim, methods):
Start Date: 17/1/2019
End Date: 31/12/2019
Sample Size: tbc

The researcher's focus for this transdisciplinary research project is to review the role of the Enrolled Nurse, specifically within the Waikato region, and in collaboration with key stakeholders. Initial findings from the writer's literature review on Enrolled Nursing highlighted significant issues that require further research. The writer considers these issues to be "wicked problems" . These involved limited employment opportunities for Enrolled Nurses within the Waikato region, poor generalised working knowledge of the Enrolled Nurse scope of practice in the nursing and health sector and significant health inequities, rural isolation and disparity of health services, within the Waikato region.

The main objectives for the researcher are to examine the role of the Enrolled Nurse, particularly for new graduates within the Waikato region, to review the knowledge of the Enrolled Nurse Scope of Practice amongst providers, and to consider how the Enrolled Nurse role can impact on the healthcare workforce and health inequities around the region.

The research will involve a variety of collection mediums including an electronic survey, focus groups and also individual interviews. The online survey is anticipated to take around 10-15 mins maximum, focus group involvement approximately one hour (per person x 2 sessions) and 30-60 minutes per individual person. The researcher is aware that there are already well-established groups supporting nursing and Enrolled Nursing in particular, and these will be approached as appropriate.

The methodology focuses on transdisciplinary research where several people are involved, not just the researcher, to review a specific issue.

Management and Resource Sign-offs

This study does not require HDEC review (will have Wintec ethics approval).

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

- The study protocol and methodology are ethical and scientifically sound.

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

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

Dept/Service/Org	Role	Name (print clearly)	Signature	Date signed
Nursing	Deputy Chief Nurse	Cheryl Atherfold		
Nursing & Midwifery	Chief Nursing & Midwifery Officer	Sue Hayward		
~~Te PunaOranga~~	~~Māori Research Review Cttee~~	~~Nina Scott~~		

Clinical Support Services Sign-offs

CROSS OUT/ADD SIGN-OFFS APPLICABLE TO THIS PROJECT

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

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

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

Appendix IV Study Planning Literature Reviews

The following Literature Reviews were conducted for the Post Graduate Certificate in Transdisciplinary Research and Innovation. These Literature Reviews also acted as the research planning approval for the study, prior to the commencement of the Master of Applied Innovation.

Literature Review

Morag MacKenzie

P.G. Cert Transdisciplinary Research and Innovation

September 2017

Literature Review – Framework and Methodology, Characteristics, Benefits and Challenges of Transdisciplinary Research

This literature review will consider various aspects of working within a transdisciplinary research (TDR) framework. It will discuss the common characteristics of TDR and noted benefits and challenges highlighted during this enquiry. This review will be structured utilising a thematic process to address these areas. This literature review is in part preparation for the Post Graduate Certificate of Transdisciplinary Research and Innovation. A further literature review will consider the role of Enrolled Nursing within the Aotearoa New Zealand healthcare setting and specifically within the Waikato region. It will also consider rural healthcare workforce and Māori engagement in nursing and the potential socio-political-fiscal changes brought about by the recent increase in remuneration for Health Care Assistants.

The definition of transdisciplinary research appears to have a variety of interpretations. Hadorn, Pohl, Hoffmann-Riem, Biber-Klemm, Wiesmann, Grossenbacher-Mansuy… Joye (2008) discuss the term transdisciplinary research being defined internationally in a variety of ways ranging from a diffuse conceptual term involving individual disciplines to any research that involves stakeholders. Researchers Westberg and Polk (2016) present TDR as a way to "address the complexity of societal problems through the exchange of knowledge and expertise across diverse groups of societal actors" (p. 385). Similarly, Wickson, Carew, Russell (2006) identify TDR as focusing on complex and multi-dimensional problems and involving and developing shared methodology with multiple disciplines.

Wickson et al. continues by citing Thompson-Klein (2015) who states that the key difference between transdisciplinarity and interdisciplinarity is the conscious and deliberate collaboration and intentional involvement of stakeholders in the identification of problems and the co-creation of solutions. Mobjörk (2010) concurs with Thompson-Klein when discussing the common core characteristics of TDR involving the collaboration between academics and practitioners/stakeholders as well as having a vision for change and sustainability.

It is noted that academic literature uses the terms 'actors' interchangeably with 'participants', 'stakeholders' and 'non-academic actors' describing the individuals that work within the TDR framework.

This literature review will discuss the themes of wicked problems, partnerships and collaboration, TDR knowledge and methodology, outcomes of TDR and learning, and the benefits and barriers to TDR.

Wicked Problems

The notion of 'wicked problems' underpins transdisciplinary research. These problems are complex and require a multi-faceted approach by a variety of stakeholders in order to find creative and flexible solutions. Wicked problems are described as being 'societal problems' or 'life-world problems' (Mobjörk, 2010, p. 869). Wickson et al. concurs with Mobjörk and agrees that TDR attempts to solve complex, multi-dimensional issues and problems related to human and natural systems (2006, p. 1048).

Roberts takes a more pragmatic and perhaps somewhat cynical approach by identifying four characteristics of wicked problems (2000). Firstly there is no definitive statement of the problem but a rather a broad disagreement of what 'the problem' could be. Secondly, the search for solutions is open-ended and dependent upon stakeholder viewpoints. The third characteristic Roberts identified is the problem-solving process being complex due to constraints such as resources, or politics. Lastly, these constraints also change as they are created by stakeholders who change, fail to communicate, or otherwise change the parameters by which the problem is solved, (p. 1).

The TDR approach can be applied to a variety of real-world societal issues.

Hadorn et al. (2008) discuss case studies and real-world examples of the various issues that can be addressed using TDR. The text highlights real-world concerns ranging from sustainability of the river and mountain environment, designing urban living, fishing and declining fish numbers, climate protection and toxic chemicals, discussion on behavioural sciences to retrofitting post-war cities.

TDR can also be utilised to address specific health issues such as cardio-vascular disease (Cooper et al., 2013) and those health disparities as outlined by the Federal Collaboration on Health Disparities Research (Rashid et al., 2009). The World Health Organisation has promoted the need to use TDR methodology to improve emergency responses as a result of recent worldwide disasters (WHO, 2012).

In addition to TDR involving various actors from outside academia and dealing with socially relevant and real-world issues, it also involves mutual learning and creating solution-oriented knowledge, (Binder, Absenger-Helmli & Schilling, 2015, p. 546), this being a practical outcome of the process.

Projects the writer has participated in which aligns to transdisciplinarity is the WHO Safe Waitakere development (Auckland West, Auckland NZ) and Shore Safe (North Shore City, Auckland, NZ) where stakeholders with interests in safer communities were established. Safe Waitakere was the first safe city in New Zealand accredited by the WHO (Safe Communities Foundation New Zealand, n.d.).

In summary, wicked problems using the TDR approach are real-world, multi-faceted complex problems that are relevant to society. Stakeholders involved in finding solutions come from a variety of fields and are both academic and non-academic, and solutions can evolve and change dependent upon people and resources and politics.

The writer's wicked problem focuses on the health workforce within the Waikato region. This will be the focus of the second literature review. What we know thus far:

- Ageing nursing workforce
- Recent wage increase for Health Care Assistants has impacted on the residential care sector financial viability
- Insufficient Maori nurses within the Waikato region
- Rural inequities for health service delivery
- Health targets for New Zealand include obesity, cardiovascular and diabetes co-morbidities
- Wintec has received an outstanding report for the Enrolled Nursing programme. The programme is currently offered at the Hamilton City Campus only, but could this be made available at satellite campuses around the region or partially on-line?
- Can Enrolled Nurses make a difference for the health workforce in the Waikato region? What issues do stakeholders see for the future workforce? How could Enrolled Nurses impact the rural sector, Maori services and the health targets for New Zealand? What is the health sector employee profile?

In addition to questions already posed in this review, it is pertinent also to consider a significant contemporary issue affecting the health sector. Recent media reports highlight the increase in wages for health care assistants already impacting on residential care facilities with closures of care homes and costs being passed onto residents, (Gee, 2017). What affect will this have long-term on this sector? Will health care providers consider employing regulated staff instead of non-regulated and is this more economical or value for money? Does the structure of the health workforce need reviewing and if so, what will the future health care workforce look like? Will health care providers support more formal education for its health workers to upskill? Can the sector accommodate workers having time away in order to gain higher education? How do local health education providers currently deliver education? Is this flexible for the needs of the industry?

The second literature review will consider the health workforce in more detail.

A broader question outside the scope of this research may also include how formal education impacts the health worker, their family/whanau and their wider social determinants of health. The commission on Social Determinants of Health (2008) discusses the unequal distribution of social determinants (e.g. income,

housing conditions, and employment) as described by Blakely and Simmers (2011, p. 3) as fundamental to driving health inequalities. Marriot and Sim (2014) conclude in their report on indicators of inequality for Maori and Pacific poor results are found in the measures of health, paid work and economic standard of living (p. 26).

Partnerships/Stakeholders/Collaboration

As previously highlighted, TDR involves the conscious inclusion of non-academic partners or actors in scientific research (Binder et al., 2015; Schauppenlehner-Kloyber & Penker, 2015; Belcher, Rasmussen, Kemshaw, & Zornes, 2016; Westberg & Polk, 2016; Smith, 2007; Hospes, Kroeze, Oosterveer, Schouten & Slingerland, 2017).

The inclusion of partners outside of research/science allows for a more holistic viewpoint on the issue at hand. Westberg & Polk (2016) define TDR projects as examples of co-construction by societal actors co-operating and exchanging experiences to understand and solve societal problems. Scholz and Steiner (2015) identify both parties as having differing interests, however: societal actors' goals are to improve their business or manage actual issues or problems, while scientists tend to seek to grow theoretical knowledge contributing to a better understanding of the real world. Klein (2008) further identified the need to have experts who fit the "problem space" because they form an "appropriate interdisciplinary epistemic community", (p. 121). It would appear then that the construction of the team is an essential component of the process.

Selection of the right mix of individual members and facilitation of the different cohorts within the group is necessary in order for the individuals and the group as a whole to establish working relationships, appreciate diverse worldviews and viewpoints of the wicked problem. Positive impacts of TDR are discussed by Walter, Helgenberger, Wiek, & Scholz, (2007) who identify network building, trust in others, understanding of others, community identification due to involvement in a TDR project, and knowledge generation and sharing by the participants (p. 334). This is further supported by Cooper et al., (2013) where partners are involved in "sharing their responsibilities and experience co-

ownership", through the development of "sustainable community-based interventions and relevant policy" (p. 33). Mutual and transformational learning occurs through the TDR framework and denotes learning that "leaves a legacy" and contributes to changing a situation (Mitchell, Cordell, & Fam, 2015, p. 93). Transdisciplinary research is not a quick fix solution nor for the faint-hearted, but rather a long-term process and work in progress for those working in the field of the societal problem.

A new 10-year longitudinal study around building resilience to natural hazards and disasters in New Zealand has commenced. The study focuses on participants' perspectives of TDR, including benefits and challenges, and potential tensions. The initial findings serve as a benchmark to track changes throughout the study. The research is conducted by and discussed in the article by Thompson, Owen, Lindsay, Leonard & Cronin (2017). They used a mixed-method approach with online surveys and small semi-structured interviews. Thompson et al. asserted that "evaluating actor perspectives and expectations early in the TDR process can give insight into how attitudes, expectations and conflicts might shape TD efforts and provide parameters for assessing change over time" (p. 30). This is sage advice as these attitudes and expectations and conflicts may well determine the success or otherwise of TDR projects. The researchers cite the analyses by Pohl et al. (2010) and Rosendahl et al. (2015) wherein individual and social perspectives impact decisions, engagement pathways and outcomes of large transdisciplinary projects.

An area highlighted by Thompson et al., is the lack of a widely accepted definition, framework or empirical strategy for conducting TDR. Further to this, actors involved in TDR projects come from a wide range of backgrounds with different values and worldviews, knowledge and understanding. They felt that this in itself, presented practical and intrinsic challenges. Their study found that despite this, actors had a consistent understanding of what embodies TDR or "co-creation" and were keen to adopt TD approaches. They saw this as a way to create "useful solutions to societal problems in practice". The article further discussed how stakeholders felt it was essential to engage with existing networks who were already participating in on-going initiatives. Additionally, the actors found there were personal rewards such as a feeling of inclusion,

empowerment and involvement in societal changes, and these were strong motivation for their involvement.

Conflict was felt by the participants however when carrying out new modes of knowledge production and research within "entrenched institutional structures.... these institutional constraints on participation centres on institutional policies, resource limitations, competitive academic programmes, requirement for single-discipline research and subsequent publication" (p. 38). These aspects of individual/institutional conflict was further supported by Grey & Connolly, (2008) who noted that the length of time for research and the potential to limit research dollars and faculty productivity was a concern. On a more personal note Belcher et al. (2016) stated that as TDR may result in fewer academic outputs, this had" negative implications for researchers whose performance appraisals and long-term career progression is governed by traditional publication and citation-based metrics of evaluations", (pp. 2-3). Suffice to say, TDR may still have hurdles to overcome, particularly within an institutional setting.

While transdisciplinary research has been a popular research method for several years, one could ask if it is accepted within a traditional institutional research structure. Jahn, Bergmann & Keil, (2012) summarise in their article how transdisciplinarity is "academically established and current funding practices do not effectively support it at universities and research institutions". In the Thompson study participants struggled with friction between wishing to participate in the TDR approach and difficulty to do so by high demands on time and resources in their day to day roles, (p. 37).

An article by Thaler and Priest (2014) as cited by Jahn et al., suggested a lack of institutional support, managing stakeholder engagement processes, poor communication and information dissemination and sharing, and limited resources, especially with significant participation type processes, hindered TDR projects. Thaler and Priest highlight inequities within stakeholders' groups for their study on sustainable waterways: a group with a higher socio-economic status are more likely to guarantee their interests, while communities without this capacity have less of a voice in the decision-making process with the consequence of less attention given by the regional or national government (p. 423).

While on the one hand, TDR has benefits, working day to day challenges exist for participants. Institutional support for a TDR project, particularly for participants from within academia is imperative. This documented concern would need to be addressed and support gained from the writer's industry partner and employer before the writer commencing the TDR project. However, the writer's institution actively supports via process and education the delivery and use of transdisciplinary research models. It would be mindful though to consider other research partner's perspectives and knowledge base and education and articulation of TDR may be necessary.

The focus of this researcher's wicked problem is situated within the health and education sector. A variety of stakeholders have been considered for this project, including health workers, to gain their opinion on further education. Highlighted in some research is the concept that health workers participation in research highlighted power, social and financial inequities within the workforce were barriers to participation, (Smith, 2007). Smith reflects on changes in power or decision-making processes for managers will be resisted by managers. Smith continues by quoting Eakin (2000, p. 164), suggesting that the health interests of workers will seldom prevail if they conflict with corporate profitability. This aspect has been incorporated into the research questions raised, see page 3 Literature Review.

In summary of this section, participants come from a variety of backgrounds with differing worldviews, constraints and expectations, to join together to consider a societal problem. Shared responsibility and co-ownership is identified as a feature of TDR, and mutual learning and knowledge sharing indicated as an outcome. Involvement in a TDR project was rewarded personally by feelings of inclusion and involvement in finding practical solutions to a specific real-world problem. Support and participation in a TDR project, however, can be hindered due to professional and personal resource issues, academic and epistemology differences, and hierarchical employment relationships alongside fiscal concerns. Difficulty with participant communication and information dissemination also stalled TDR projects.

For this TDR project, the writer will need to consider team membership and the inclusion of academic, funder and non-academic stakeholders. Pragmatic components will be sound facilitation, communication and collaboration. Constraints of participants and acknowledgement of differing world views and recognition of personal and professional limitations, stakeholder structures and individual discipline areas issues must be addressed and acknowledged. A realistic budget with consideration for unexpected events would need to be set. Support for the project and its direction has been gained from the industry partner and employer.

Methodology Framework

Historical factors appear to have played a significant part in the need to integrate or re-integrate disciplines to consider a TDR approach to address societal problems today. Mauser, Klepper, Rice, Schmalzbauer, Hackmann, Leemans & Moore (2013) state that the specialization and fragmentation of science in various disciplines have produced knowledge of quantity and quality. However, it has also meant that these individual sciences have now become isolated within their cultural context. This isolation had not equipped them to handle the complexity of real-world problems, despite having the essential knowledge methods and tools available (p. 422). In reviewing the definition of wicked problems earlier, one can see that it is imperative to have a wealth of viewpoints in order to find sustainable solutions. One specific discipline would not have the depth of knowledge to support a practical solution wholly.

The practice of integration appears to have been necessary for researchers to work on problems and in the context of application rather than disciplines in order to deal with complex societal issues. TDR also involves the integration of non-academic partners. This is important to gain a broader aspect and understanding of the real-world societal issues from people who work with the issues on a day-to-day basis.

With several actors involved within a project, it is vital to consider the management and coordination of the team. Co-creation and sharing of the

research responsibilities and requirements are acknowledged by Mauser et al., who propose a framework for integration: co-design of the research, co-production of knowledge and co-dissemination of the results (p. 428). This supports the inclusive nature of the TDR process and the different make-up of a TDR team. It would further support a power distribution within the team. Several academics have further deliberated the make-up of the team. Scholz and Steiner (2015) discuss the concept of co-leadership and specific expert drivers (p. 523). Valuing knowledge and skills of team members, clear communication, trust among the team and team members being competent in their disciplines was cited as necessary by (Dyer, 2003, p. 187). To summarise, the TDR project participants need to be experts in their field. Additionally, clear communication and the establishment of positive team relationships are integral components for the success of the team.

Time and energy is required to build a team involving various stakeholders with a commitment of 5-10 years identified as a realistic timeframe for results. The team's identity and function is largely dependent upon the members and their worldviews. Facilitators must be skilled to manage people, differing worldviews and bodies of knowledge (Roux, Stirzaker, Breen, Lefroy & Cresswell, 2010, p. 739). Structured team processes and the management of the group require a structured and transparent framework.

Five propositions were advocated by Schauppenlehner-Kloyber & Penker (2015) and were detailed in their article on managing group processes (p. 69). The propositions are

- TDR intervenes in societal systems and shape stakeholders experiences. Therefore, researchers must be aware of the effect
- Complex process designs require professional communication and management
- Groups are at the core of TDR activities and financial and personnel resources, space and time should be provided for the project
- Consideration of group process and development over time contributes to more effective working processes and more effective outcomes
- Turning results from the TDR into action requires complex learning processes for all in the group and impacts on society – an individual participant may now have an altered decision-making capacity which in

turn is transferred into their reference group that can support long term transformation.

As defined by Bergmann, Klein & Faust, (2012) the methods of TDR research and knowledge integration are described relating to a specific societal problem, having its own specific research team consisting of various disciplines, scientific fields and participants related to that societal problem (p. 15). Each wicked problem, therefore, has its own unique individual methodology, research team and detailed solutions – there is no 'one size fits all'. Bergman et al., state that if one wants to apply these methods to any other transdisciplinary problem, the methods must be "de-coupled or de-contextualised" and described in more general terms (p. 15). The chosen integration strategy must also be reviewed repeatedly and adjusted if needed throughout the research process. (p. 20). This is known as the principle of recursiveness as each step of the process is subject to iteration. Each step within the TDR process must be reviewed given the variety of people involved, subsequent discussions held, and adjustments made. Differences must be settled, and knowledge claims revised and decided upon by the group. This is particularly important for the outcome of the societal problem and the potential solution when participants disagree, and modifications to the solution are required. It now becomes more apparent how the complexity of a wicked problem requires the complexity of a process, involving many players to find a sustainable solution that is both acceptable, and relevant, to the problem and that of the research group. This concept is supported by Vilsmaier & Bergmann (2013) who discuss the fundamental concepts of TDR and its methodology: integration, collaboration, mutual learning, problem framing, co-production of solutions, and bringing the solution to fruition.

Further discussion on the above methodology by Bergmann from the Berman et al., 2012 book publication, succinctly discusses the three dimensions of integration being cognitive-epistemic, social and organizational, and communication dimensions. Cognitive-epistemic looks at the differences and similarities of science and practice and understanding the methods and terms used by each sector and then developing new methods together. Social and organizational dimension considers the different interests and activities and the sub-projects of the research group. This also includes leadership, mutual

understanding and the group's willingness to learn. The communicative dimension is linking the various communication styles and expressions and practices to find a common understanding, clarifying common terms and constructing a new one (Bergmann, 2017). These components help understand the group processes required and the merging required for various bodies of knowledge: specifically academic and non-academic.

The discussion above has centred on a fluid methodology, deconstruction and re-construction with individual groups and solutions, and from this, it would seem that TDR is non-prescriptive in its framework design and possibly difficult to interpret or identify. Perhaps this in itself makes it difficult to articulate the TDR process. However, an article by Roodt & Koen (2014) describes the analogy of using a systems engineering approach to understand the complexity of a wicked problem and provide a practical framework to address the complex issue (p. 1). This helps to frame the TDR process and provide a guideline for its workings.

Further discussion by Binder et al., (2015) defines practical elements of research: how to set up projects, how to evaluate the success of TDR and lastly to review experiences of researchers with real-world problems and to overcome knowledge gaps (p. 546). Within the first element are three phases – firstly problem framing and team building, secondly project partners focusing on project work and co-generation of knowledge and then thirdly knowledge integration. This last phase is the process for making the results useful for all parties and would assist in the understanding of the problem and the processes required for developing a sustainable solution for all.

A logical approach is needed to frame, analyze and process the societal problem. Grasping the complexity of an issue, the diverse perspectives, and developing "descriptive and practical knowledge to promote what is perceived to be the common good" (Pohl, 2011, p. 620) helps to unravel the intricacies of the problem and create an acceptable solution. Further examination of knowledge is required.

Pohl & Hadorn, (2008, pp. 431-432) discuss the types of knowledge considered in a TDR project: systems knowledge, target knowledge and transformational knowledge. Systems knowledge identifies the problem and the uncertainties associated with transforming the problem and concept into a concrete solution.

Target knowledge looks at the need for change, anticipated outcomes and improved practices. Transformational knowledge considers cultural, ethical, technical, sustainable, political and social components when transforming current practice into improved practices.

Wickson et al. (2006) best summarizes clarification of TDR processes who state "there is no single methodology for TDR, and that methodologies used in TDR need to respond to and be reflective of the problem and situation under investigation" (p. 1049). The authors further state that "transdisciplinarity is characterized by an interpenetration of epistemologies in the development of methodology" and that the "dissolution of disciplinary boundaries is necessary for the construction of novel or unique methodologies tailored to the problem and its context" (p. 1050). This interpretation, however, does not provide a definitive framework for a novice researcher. Further investigation revealed that it was acceptable to use traditional forms of research methods in TDR projects: mixed-method (Thompson et al., 2017), quantitative and qualitative methods (Krettek & Thorpenberg, 2011; Claasen et al., 2015). Leavy (2016) provided the most reassuring guidance by advising that "any TDR design can use any method in pursuit of the research objective". Leavy continues by saying that these methods are only tools for data collection and "does not dictate whether or not the approach to research is transdisciplinary", (p. 54). Leavy provides a sense of comfort that one can still use traditional and more well-known methods for research. It is more about the philosophy and process that defines transdisciplinary research.

In summary, the TDR process is underpinned by a fluid research methodology involving integration and collaboration responding to people, problems and the context in which the research is conducted. TDR can utilize any traditional research method. TDR methodology evolves due to many factors: wicked real-world problems that may in themselves be evolving, a range of stakeholders including academic and non-academic actors, varying epistemologies, knowledge and practice, and reflection and iteration. Included in the methodology is the need to acknowledge the importance of team processes. Team building is imperative as well as professional communication, management and facilitation. Adequate resourcing and funding is imperative to

support the research process and the participants. Regular reflection and evaluation is a vital component to monitor progress and address difficulties that may occur.

A TDR project addresses different knowledge concepts: systems, target and transformational knowledge. What is the wicked problem, and what are the potential uncertainties when considering a solution? Why does the problem need to be changed, and what are we hoping to achieve or improve? What would we need to consider when doing so?

How will this impact on the writer's research project of the Enrolled Nursing workforce in the Waikato region, nursing workforce development and rural inequities?

Collaboration and communications will be critical components, with partners from various interest groups throughout the region being invited to participate. This would include but not limited to the industry partner the Centre of Health and Social Practice (CHASP), CHASP Employers Engagement Group, Waikato District Health Board, Population Health, NZNO Enrolled Nurse Division, Maori Health providers, local care providers, rural groups, students – past, present and potential.

Discussion to establish the wicked problem will not be limited to the writer's thoughts and understanding but rather from dialogue with the group. Progress will involve team processes, consultation, meetings, reflection and review, and iteratively refining the issues. On a practical note, an adequate budget to ensure team support, administration of the project, research time and longevity of the project must be well-thought-out.

Outcomes – reflection, learning, evaluation

Of particular note, while reading through academic articles is the importance that reflection plays in TDR. The methodology highlighted in the previous section focuses on the need to reflect, review and reiterate throughout the research process. This appears to be at a group level and an individual level: the group level when participants are together considering the project and the individual

level when looking at individual learning or viewpoints.

Reflection for researchers is therefore essential, as the researcher's worldview has contributed towards the understanding of the problem, research method and mode of enquiry. In addition to this, understanding and reflection of the various bodies of knowledge within the stakeholder group is needed. This then requires the deconstruction of the bodies of knowledge and the rebuilding of new ones (Wickson et al., 2006, p. 1053-1054).

In order for this deconstruction and co-creation of knowledge, guidance is required to provide an understanding of the components involved. Lawrence (2015) identifies an article by Alvesson & Skoldberg, (2010) citing Popa, Guillermin & Dedeurwaerdere, (2015) and four main characteristics of reflexivity related to TDR: collaborative deliberation to develop a shared understanding of a problem; social relevance of the problem framing; social experimentation and collective learning processes; and the critical and transformative character of the research agenda. Reflection is required in all four stages of TDR from discussing the problem and its societal relevance, formulating the action plan and reviewing learning outcomes to the contribution of the research and transformation of the problem (p. 3).

With the diversity of worldviews and knowledge within the research, group reflection is essential for each member in order to better understand each other and the wicked problem. Roux, Stirzaker, Breen, Lefroy & Cresswell (2010) highlight the concept of co-reflection by all parties in the stakeholder group whereby reflection and adaptation should cover the aspirations of those in the group, namely the three parties involved- research funders, research providers and research users. Furthermore, Roux et al. cites Biggs assumption that reflection is an integral part and enabler of adaptive learning (p. 735). Roux et al. discuss the need for a facilitated workshop at the commencement of a programme and then regularly after that to facilitate "learning by doing”. This co-reflection will offer opportunities for stakeholders to understand each other's worldviews better while working collectively towards a "defined social purpose or aspiration goal" (p. 737). This is further supported by Schauppenlehner-Kloyber & Penker (2015) who proposed the need for reflection throughout the TDR project involving team processes, project progress, learning processes and any occurring difficulties (p. 58).

In summary, a researcher's understanding of the problem, investigation, solution, and body of knowledge moulds their contribution to the research. In turn, each member of the group reflects with other members in order to formulate a new understanding and body of knowledge and to find a solution for the wicked problem.

Learning is another key outcome for TDR. In particular transformational learning described by Mitchell et al. (2015) is learning "that leaves a legacy and contributes to changing the situation", (p. 93), and is considered to have an impact beyond the life of a project. Learning includes the relationships, interactions and communications within the stakeholder group and supports collective discussions and decision-making and ultimately "doing things differently" (p. 93). Polk & Knutsson (2008) define mutual learning as focusing on "informal exchanges of knowledge and experiences based on reciprocity and reflexivity". Polk and Knutsson identify that mutual learning is aligned with social learning and the growing individual and group understanding of a specific phenomenon (p. 646). This is appropriate therefore, when discussing the learning that occurs within TDR projects stakeholder groups and individual participants themselves.

This concept of learning is further defined by Vilsmaier et al. (2015), who asserts that learning is a fundamental element of TDR. Learning allows for "integrating knowledge and experiences gained in different contexts, including the building of consensus about necessary transformations to reach sustainability solutions", (p. 563). From the process of communication, exchange in understanding of world views and defining of the wicked problem, mutual knowledge emerges as new ways of understanding are created within the stakeholder group. Alongside this transdisciplinary relationships are established, and new ways of working are created.

How do we overcome differences and establish ways of working together within a diverse group of societal actors? Klein identifies the need for negotiation and compromise due to the diverse mix of disciplines (2008, p. 119). The concept of boundary objects was introduced by Star and Griesemer in 1989 and helps various stakeholders involved in the TDR process co-operate despite differing

and conflicting worldviews. Stoytcheva (2015) details this concept, describing how a boundary object fosters collaboration between parties in a community of practice. They can be concrete or conceptual and are interpreted by individuals dependent upon their worldview. Boundary objects are a means of communication and can be simple tools that are familiar to individual members in the group but used and viewed from individual perspectives. Boundary objects are a common area or space where individuals connect.

In summary, learning is an individual and a group process. It involves the merging of differing bodies of knowledge and development of common terminology and understandings. Negotiation and compromise are required alongside the balancing of individual experiences, worldviews and agendas. In addition to this, it is guided by the group purpose and encompasses diverse socio-political and cultural viewpoints.

Given the complexity of societal problems and the complex solutions required, how do researchers evaluate a transdisciplinary project? Wickson et al. (2006) identifies two practical frameworks that can be utilised. The first framework considers the problem and how it was formed, the methodology and problem context and how competing bodies of knowledge or epistemology were considered. Further discussion in this framework considers collaboration, communication, reflection, and differences within the research (pp1055-1056). The second framework stated by Wickson et al., (2006) cites Glassick, Huber, Maeroff & Boyer's (1997) framework of evaluation. In order to reflect a transdisciplinary approach, Wickson et al., have adapted this framework. The six defined areas for TD evaluation are responsive goals, extensive preparation, evolving methodology, significant outcome, communication and communal reflection (pp. 1056-1057).

Similarly Mitchell et al. (2017) recognized the need to regularly review and adjust and evaluate strategies to ensure transdisciplinarity was maintained within the TDR process. They further identify factors that support the TDR process: adequate funding, sound communication and adequate time to formulate research questions. In addition to this, they noted the need to review shared conceptual frameworks, to have flexibility with emerging findings and sufficient funding to explore these and the advantage of mixed discipline teams who proactively integrate and seek contributions from all disciplines.

Discussion and Conclusion

The wicked problem under consideration is the health workforce within the Waikato region. As previously discussed, we have an ageing nursing workforce, rural health and wider social determinant inequities and low numbers of Maori and Pasifika nurses for the population. Recent wage increases for Health Care Assistants have impacted on the aged residential sector. Positive regulatory reports have been received regarding the Enrolled Nurse programme and development is underway for a Certificate in Health and Wellbeing at Wintec. What does the sector need? What is the profile of potential employees? How can Wintec cater for current and future health sector workforce needs?

A further literature review on the current health workforce and the need for further stakeholder discussion and collaboration will help gather specific knowledge. Partnerships include the Centre of Health and Social Practice (CHASP), wider Employers Engagement Group, Waikato District Health Board, NZNO Enrolled Nurse Division, Maori Health providers, local care providers, rural groups, and students – past, present and potential.

The potential mutual benefits would be an ample workforce, decreased rural health inequities, increased Maori and Pasifika nursing workforce, appropriately educated and marketable workforce that is work ready and fit for purpose and increased health outcomes for consumers.

Disciplines to consider are health, financial, nursing, health care providers, education, cultural, research, information technology, government, non-government, prospective students and employees.

In summary:

What is the wicked problem, and what are the potential uncertainties when considering a solution?

Why does the problem need to be changed, and what are we hoping to achieve or improve?

What would we need to consider when doing so?

Systems knowledge, target knowledge and transformational knowledge will be

required to adequately address these contemporary issues and construct a framework for inquiry and collaboration.

In conclusion, transdisciplinary research focuses on real-world societal issues known as wicked problems, utilizing the skills and talents of expert stakeholders to co-create a workable, real-world sustainable solution. This literature review has considered many aspects of the transdisciplinary research process, including the definition and typical characteristics of TDR and noted benefits and challenges. The diversity of the TDR stakeholder team has been highlighted, comprising academic and non-academic participants noting the importance of communication and collaboration within the team. Group and individual reflection, learning and knowledge deconstruction and co-creation are also fundamental components of TDR research. Furthermore, various methodologies can be used to support the iterative process and use the principle of recursiveness, while the concept of fluidity and evolving methodology of the TDR research is an over-arching principle.

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Literature Review – Enrolled Nursing

P.G. Cert Transdisciplinary Research and Innovation

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This literature review will consider the role of Enrolled Nursing within the Aotearoa New Zealand healthcare setting and specifically within the Waikato region. It will reflect on the history and role of Enrolled Nurse, rural health inequities and the healthcare workforce, Māori engagement in nursing and the potential socio-political-fiscal changes brought about by the recent increase in remuneration for Health Care Assistants. This review will be structured utilising a thematic process to address these areas. This literature review is in part preparation for the Post Graduate Certificate of Transdisciplinary Research and Innovation. A previous literature review focused on the transdisciplinary research (TDR) framework, including common characteristics of TDR and noted benefits and challenges.

Introducing the Enrolled Nurse Scope of Practice

The nursing workforce, in general consists of two tiers of regulated and qualified nurses throughout the world: Registered Nurse (RN) and Enrolled Nurse (EN). While they are known by many different titles, they are essentially very similar. An RN has completed a 3-4 year study programme, while an EN has completed a 1-2 year study programme. The EN is known as a Licensed Practical Nurse in the United States of American (Charter College, 2017), a Licensed Vocational Nurse in Texas and California (Study.com, n.d.) Registered Practical Nurses (Registered Nurses' Association of Ontario, 2017), State Enrolled Nurse in the United Kingdom (Nursing Management, 2016), Enrolled Nurse or Division 2 Nurse in Australia (Nursing and Midwifery Board of Australia, 2017) and Enrolled Nurse in Aotearoa New Zealand (Nursing Council of New Zealand, 2017).

A review of the literature revealed an article written by Gibson and Heartfield (2005) discussing a long tradition of training and employing Enrolled Nurses in Australia. Their research of Australian and New Zealand literature "indicated very little research had been undertaken in the role, function, competence and education of Enrolled Nurses", (p. 126). The reason given for this scarcity appears to centre upon the confusion and debate about the role of the Enrolled Nurse (p. 127).

Twelve years later this appears to be improving with a moderate number of articles available from Australia, but only handful still from New Zealand, the majority of which are mostly government or Nursing Council of New Zealand articles and reports based upon statistics and employment, or, informational articles from the New Zealand Nurses Organisation magazine publication, Kai Tiaki.

The Enrolled Nurse in Aotearoa New Zealand

Today's Enrolled Nurse works under the direction and delegation of a registered nurse or nurse practitioner working with health consumers across the life span. The Enrolled Nurse contributes to nursing assessments, care planning, delivery and evaluation of care, with the Registered Nurse having overall responsibility (Nursing Council of New Zealand, 2017). The primary specialty areas of training for an Enrolled Nurse is gerontology, (the study of ageing) rehabilitation, acute medical or surgical and mental health.

However, the role of the Enrolled Nurse within Aotearoa New Zealand's healthcare setting has been one of multiple name changes, differing scopes of practice and confusion regarding direction and delegation and the ability to independently practice. In 1939 a register was set up for Nursing Aids and a short course of study developed in response to World War II and an outbreak of tuberculosis. These Nursing Aids were to help Registered Nurses (RN) by providing cares for other patients, while the Registered Nurse cared for acutely ill and injured patients (Prinsloo, 2014, p. 20). The new course was 18 months long and was suited for nurses of "lesser abilities" and those students who "could not pass the registered nurse examination", (Lambie, 1951, as cited in

Prinsloo, 2014, p. 22). The Enrolled Nurse later became known as a second-tier nurse, and their course of study ranged from 12 to 24 months in length.

In the early 1990s due to changes in employment, Enrolled Nurses were considered too expensive, and their hospital-based training was phased out in favour of a cheaper un-trained workforce in Health Care Assistants. The Enrolled Nurse was demoted in name change to Nursing Assistant and now worked under the direction and delegation of the Registered Nurse. Enrolled Nurses were faced with demotion or the need to retrain as a Registered Nurse (Hylton, 2005). Hospital-based training for Registered Nurses had moved into tertiary institutes a decade prior.

Australia also experienced similar changes to its nursing workforce. Furthermore Enrolled Nurses experienced lack of uniformity with training within state regions and difficulties with what they were able to do within their role due to varying policies of individual employers, (Gibson & Heartfield, 2005, p. 131). Anecdotal discussion with Enrolled Nurses in New Zealand reveals poor role definition exists today for Enrolled Nurses employed in different District Health Boards and private employers, particularly around medication and responsibilities.

According to Dixon (2009, as cited in Prinsloo, 2014), an extensive review of the Enrolled Nurse role with consideration of the Australian nursing workforce, resulting in the re-establishment of the Enrolled Nurse training with an increased scope of practice (p. 25).

The Enrolled Nurse study programme recommenced in 2010 onwards and is an 18-month course known as the Diploma of Enrolled Nursing. Alignment with the New Zealand Qualification Authority Framework in 2016 has seen the course recognised as the New Zealand Diploma of Enrolled Nursing.

The New Zealand nursing workforce has three scopes of practice: Enrolled Nurse, Registered Nurse and Nurse Practitioner. As previously stated, the Enrolled Nurse specialty areas are now defined as residential care, rehabilitation, mental health and acute care, and they must work under the direction and delegation of a Registered Nurse, or registered health professional, (Nursing Council of New Zealand, 2017). While the Nursing Council clearly

outlines this, confusion still occurs within the health sector, particularly nursing, on the role of the Enrolled Nurse, their skills and knowledge base.

Anecdotal discussion indicates confusion for some Registered Nurses who are unsure of the scope of practice of the Enrolled Nurse. Newer Registered Nurses have not had experience working with Enrolled Nurses and are therefore unaware of what they are trained to do or have knowledge about their skills. This was indicated some time ago in the Gibson and Heartfield article, which noted a "lack of differentiation between Registered and Enrolled Nurses", (2005, p. 133). This is further supported by Jacob, McKenna and D'Amore (2016) who discussed the increasing similarity in the nursing graduate skills and knowledge, combined with limited experience with nursing staff to the changes for the Enrolled Nurses has resulted in "confusion with the nursing workforce about expectations of the ENs" (p. 174). Jacob et al. (2016) discussed the need to educate the broader workforce on the role of the Enrolled Nurse, with the intended outcome of increased employment expected due to their increased skills, and lower cost of employment compared with a Registered Nurse.

The New Zealand Nurses' Organisation Enrolled Nurse Section Strategic Plan 2016-2021 (2016) supports and outlines the need for a more definitive profile for Enrolled Nurses in New Zealand. Areas highlighted in the document include raising the profile of the Enrolled Nurse, opportunities for employment and clarity around scope of practice, appropriate funding for an Enrolled Nurse entry to practice programme, involvement in Tikanga Māori and integration of bi-cultural practices and contribution to the health workforce.

A suggestion of a nursing workforce ratio of 70%/30% of ENs to RNs has been mooted for the future health workforce. However, this is anecdotal, and the researcher is unable to verify these claims.

Health Workforce in Aotearoa New Zealand

The Nursing Council of New Zealand commissioned Business and Economic Research Limited (BERL) to conduct a review of nursing in New Zealand, based on current information and projected population changes (Nursing Council of New Zealand, 2013). Using 2010 statistics, BERL noted that of the 45,460

nurses in the country, over 50% of the nursing workforce would be retired by 2035 and as at 2010, 90% of the 3130 Enrolled Nurses in New Zealand were over 45 years old (p. 18). The writer proposes that while an ageing nursing workforce applies to both types of nurses, the high percentage of older Enrolled Nurses is likely due to lack of training for from the early 1990s until mid-2000s, and therefore no new Enrolled Nurses entered the workforce during those years.

Of particular interest from this report, of the 290 graduates of the EN programme in 2010, only 7% were Māori and 1% Pacifica (p. 28).

BERL projects in order to meet nurse to population ratio, and, taking into consideration the ageing nursing workforce, "an additional 865 RNs and 88 ENs will need to enter the workforce each year between 2010 and 2035". This will grow the nursing workforce from 45,460 in 2010 to 69,280 nurses in 2035 (p. 7). The predominant place of employment for Enrolled Nurses is within a District Health Board (DHB) setting and residential care. The latter is expected to double by 2035 from 970 to 1810 ENs (p. 30), with increased demand for Enrolled Nurses to work within the DHB setting.

The 2016 report from the Nursing Council of New Zealand (2016) indicates the total number of nurses in New Zealand at 53922. However, EN numbers have fallen to 2737 despite 163 Enrolled Nurses being added to the register for 2016.

A recent article in the Nursing Review (Nursing Review, 2017b) indicates mixed support throughout New Zealand on Enrolled Nurse employment. While stakeholders, in particular, DHBs, are supportive, employers are not as keen to include this level of nurse in the staffing matrix.

In discussion with key stakeholders and persons of influence within the nursing sector, notably Enrolled Nursing, the researcher notes that understanding of the EN role of the Enrolled Nurse appears to be a barrier to their integration within the workforce. Many Registered Nurses today have not worked with Enrolled Nurses and therefore are unsure of their training, skills and expertise. On a personal note, the writer considers the historical impact of nursing, with the Enrolled Nurse being withdrawn from the workforce. Registered Nurses were required to expand their role to include Enrolled Nurse roles, and non-regulated workforce was utilized and required to upskill to fulfil traditional Enrolled Nurse

roles. One could then surmise room must, therefore, be made for the Enrolled Nurse in today's workforce.

Nationally the number of ENs employed remains low despite training, with some institutions not offering the course due to poor uptake with employers. The BERL report (Nursing Council of New Zealand, 2013) indicated that less than 250 ENs were employed within the Waikato region. From personal knowledge, the writer is aware some recent Waikato Institute of Technology (Wintec) graduates have found employment in the mental health services, operating theatres, residential care, and Iwi providers and recently within the Older Persons and Rehabilitation Services. The researcher is aware that the Corrections Department is also considering the EN role within their staffing matrix and have employed six ENs in the Auckland region, and this may be extended throughout New Zealand. The researcher surmises that this is potentially beneficial for Waikato as it houses two correctional facilities.

Graduates from Wintec are travelling further afield from Waikato for employment, including the South Island. A review of the employment website SEEK, October 2017, 12 positions were available, 11 in the South Island. Canterbury District Health Board is proactive in employing ENs. Conversely, Toi Ohomai (formerly Waiariki Polytechnic) had discontinued its EN programme "because clinical placements had been difficult to secure and also because iwi stakeholders believed the RN scope of practice better suited the needs of local Māori health consumers" (Nursing Review, 2017). The article also identifies that Northtec (Northland Polytechnic) had also noted the same difficulty.

In summary, the New Zealand nursing workforce must increase every year to support consumer needs adequately. Despite Enrolled Nurse study programmes being offered throughout the country, slow uptake of employment is seen.

Waikato Region

From a regional perspective, training is well underway with a successful study programme for nurses. The Enrolled Nurse training is offered by the Waikato Institute of Technology (Wintec) based at the City Campus in Hamilton, Waikato,

New Zealand (Waikato Institute of Technology, 2017). The programme's student numbers have been capped at 30 graduates per year, however, with a recent Nursing Council of New Zealand (NCNZ) audit, this cap has been removed. This allows for an increase in class sizes and intakes/courses offered per year.

Of the Wintec graduates, 15-20% re-enter study into the Registered Nurse Bachelor of Nursing Programme (Nursing Review, 2017b). The majority of EN graduates gain employment. However, not all positions are within the Waikato region – see previous comments concerning graduates obtaining positions in the South Island.

The programme is in its 6th year of delivery at Wintec and demand for the programme is consistent. Pass rates for the State Finals examination are above the national average of 97% and are 100% for Waikato. Anecdotally the Wintec graduates are from a variety of ethnic backgrounds with an increase in Māori and Pacifica students noted in the last two years. This bodes well for the broader Waikato population, however, is still well short of the number of nurses required, Māori in particular, for the percentage of the population.

Māori engagement in nursing - Waikato

An article in the Kai Tiaki magazine, published by the New Zealand Nurse's Organisation discusses the need to support Maori in their studies and career. The article by Maria Baker entitled "Developing the Maori Nursing and Midwifery Workforce" focuses on not just those nurses who have trained but discusses the impetus to enter the health field: passion, a desire to improve Māori health, influence from role models and whānau inspire Māori and shape their decision to enter the nursing and midwifery workforce (Baker, 2009). Baker discusses the need for appropriate supports for Māori throughout their study, including peer support and mentoring.

In the Waikato however, this support has been part of the nursing programmes for over two decades and is known as the Tihei Mauri Ora stream. It was established in 1990 to provide a culturally safe environment for Māori students

(Liddell, Te Apatu, Syminton & McHaffie, 2014). This integral programme continues today with a steady increase in numbers. The Tihei Mauri Ora stream philosophy or kaupapa (ways of being) is based upon whānau (family) and Tikanga (traditional ways of knowing) (Liddell et al., 2014, p. 4).

Wintec and Tainui have recognised the need to encourage and support Māori into nursing and have marked the 10th year of support by creating 10 Dame Te Ātairangikaahu Nursing Scholarship to assist Māori. Hera White, Wintec Director Māori, highlights the Māori population in the Waikato at 23% with Māori nursing numbers at 8%. White states "a further 604 Māori nurses are required to ensure the nursing workforce and Waikato DHB district population demographics are aligned"(Waikato Institute of Technology, 2016).

The executive summary report by BERL on the future health workforce states "the current nursing workforce does not reflect the changing ethnic composition of the New Zealand population. Further strategies are required to increase the proportion of Maori and Pasifika students enrolling in and completing nursing programmes" (Nursing Council of New Zealand, 2013, p. 3).

When considering population needs with nursing availability, a shortage of nursing is noted for Māori clients. The Iwi Māori Council of the Waikato District Health Board noted in 2015 concern with the mismatch of Māori nurses to Waikato DHB Māori population. The Māori workforce in 2015 was 6.3% (Waikato District Health Board, 2015), and the Maori population is 23% (Ministry of Health, 2016).

To further support improvement in health for Māori across the Waikato region, a recent Memorandum of Understanding has been signed between Waikato District Health Board and the Iwi Māori Council. This will lead the way for radical change in the delivery of health and disability services in the Waikato for Māori (Waikato District Health Board, 2017c).

Theunissen (2011) discusses how the nursing workforce has a significant role to play in "relinquishing Māori from health disparities that segregate them as a population". Theunissen discusses how incorporating cultural safety, patient advocacy and Māori-centred models of care will support nurses to support Māori and improve health outcomes.

Statistics clearly indicate a need to review service delivery and population health strategies.

Health inequalities

Waikato District Health Board serves a population of over 400 000 people. The Waikato District Health Board region covers 21,000 square kilometres from Coromandel to Mt Ruapehu in the south, and from Raglan on the west coast to Waihi on the east, (Waikato District Health Board, 2017b).

Of particular note statistically is the ethnic mix in the Waikato includes more Māori (23%) and fewer Pacific (3%) people than the national average (Ministry of Health, 2016).

Health statistics reveal significant health inequalities for Māori versus non-Māori. Te Rōpū Rangahau Hauora a Eru Pōmare was commissioned by the Ministry of health to produce a Māori Health Profile for each District Health Board (DHB) in Aotearoa New Zealand for planning and funding purposes (Ministry of Health, 2015). The report for Waikato reveals concerning statistics regarding health for Māori and in particular chronic conditions. Some are highlighted below:

Smoking rates are decreasing, but remain more than twice as high for Māori as for non-Māori (36% compared to 15% in 2013).

Māori adults aged 25 years were 82% more likely than non-Māori to be hospitalised for circulatory system diseases (including heart disease and stroke) in 2011–2013.

Waikato Māori were 28% more likely than non-Māori to be admitted with acute coronary syndrome, 43% more likely to have angiography.

Stroke admission rates were twice as high for Māori as for non-Māori, as were rates of admission for hypertensive disease.

Chronic rheumatic heart disease admissions were almost six times as frequent for Māori as for non-Māori, while heart valve replacement rates were just over twice as high.

6% of Māori were estimated to have diabetes. Nearly half of Māori aged 25 years and over who had diabetes were regularly receiving metformin or insulin, 84% were having their blood sugar monitored regularly, and almost two-thirds were being screened regularly for renal disease.

During 2011–2013 Māori with diabetes were nearly four times as likely as non-Māori to have a lower limb amputated.

Compared to non-Māori, cancer incidence was almost 50% higher for Māori females while cancer mortality was close to twice as high. The rate of lung cancer was four times the rate for non-Māori, as was the mortality rate. Breast cancer incidence and mortality rates were both two-thirds higher for Māori than for non-Māori.

Colorectal registration and mortality rates were similar for Māori and non-Māori. Stomach cancer was the fourth leading cause of cancer death with four times the mortality rate of non-Māori.

Breast screening coverage of Māori women aged 45–69 years was 55% compared to 68% of non-Māori women at the end of 2014Respiratory disease

Māori aged 45 years and over were 3.8 times as likely as non-Māori to be admitted to hospital for chronic obstructive pulmonary disease (COPD).

Asthma hospitalisation rates were 2 to 3 times as high for Māori than for non-Māori in each age group.

Māori under 75 years had four times the non-Māori rate of death from respiratory disease in 2007–2011.

Māori were four-fifths more likely as non-Māori to be admitted to hospital for a mental health condition during 2011– 2013. Schizophrenia was the most common condition.

In 2011 the prevalence of gout among Waikato Māori was estimated to be 7%, twice the prevalence in non-Māori (3%).

Almost 5,200 Māori hospital admissions per year were potentially avoidable, with the rate 38% higher for Māori than for non-Māori.

The all-cause rate of hospital admissions was 16% higher for Māori than for non-Māori during 2011–2013

Leading causes of death for Māori females during 2007–2011 were ischaemic heart disease (IHD), lung cancer, COPD, diabetes, and stroke.

Leading causes of death for Māori males were IHD, accidents, diabetes, lung cancer, and COPD

In consideration of these statistics and the low numbers of Māori nurses for the population in the Waikato, several questions are raised. Would an increase in the Māori nursing workforce impact on the health statistics of Māori in the Waikato? Could Enrolled Nurses working within communities help to improve health outcomes for the wider population and in particular Māori? Could a flexible EN study programme offered within the region help support students to study within their communities, potentially increase chances of employment locally and support local health consumers and services?

Rural inequities

Despite anecdotal evidence to suggest that people residing in rural areas have poorer access to health services, research has been limited to support this claim. Indeed, one could consider the difficulty with transport, access to services and supports and reduced health workforce as factors affecting rural health. The local Waikato DHB acknowledges the issues affecting rural communities such as travel time and costs, attracting and retaining staff, fragmented health services and rural communities can be poorer (Waikato District Health Board, 2017a).

A report conducted by the National Health Committee comprehensively reviewed the status of rural New Zealand, issues, concerns and innovations (National Health Committee, 2010). Ten recommendations were tabled for development, including service development. One initiative, in particular, are the new models of primary health care with several communities now having nurse-led clinics, nursing outreach teams, or other ways of intensively using the skills of nurses. It was further noted "increasing the involvement of nurses in primary health care can improve the health of the population in a cost-effective way" (p. 12).

Another role highlighted by the National Health Committee was Kaiawhina (helper). These roles helped bridge the gap for primary health between health professionals and whanau by incorporating concepts such as "tautoko (support), manaaki tangata (hospitality), karakia (spiritual guidance) and other Maori cultural imperatives" (p. 13).

The Nurse Maude Project in Canterbury (known as Total Care) utilises the skills and knowledge of Enrolled Nurses and has done so since 2011. Since this time evaluation shows the Total Care Service has achieved the following outcomes:

• reduced attendance at emergency departments

• reduced hospital admissions

• reduced length of hospital stay

• improved efficiency (e.g., effective use of staff time and better management of a person's medication)

• high patient and family satisfaction with the quality of care

The project employed graduates from the Canterbury Polytechnic Enrolled Nurse course in 2011. The Enrolled Nurses were well supported into practice by Registered Nurses and mentored by the Enrolled Nurses already employed. A proposal called ENSIPP is calling for funding and support for an appropriate entry to practice programme for graduating Enrolled Nurses (2014).

While the key nursing role in rural communities is for RNs, Clinical Nurse Specialists and Nurse Practitioners, could Enrolled Nurses be utilised to support these teams in more rural communities?

Health Care Assistant pay increase

In addition to discussions posed in this review, it is pertinent to consider a significant contemporary issue affecting the health sector. Recent media reports highlight the increase in wages for health care assistants already impacting on residential care facilities with closures of care homes and costs being passed onto residents (Gee, 2017). Health Care Assistants (HCA) are non-regulated

carers who support clients in a variety of settings, but often employed in residential care facilities.

Further complicating these questions is the current pay negotiation occurring within the District Health Boards involving the New Zealand Nurses Organisation and the Multi-Employment Collective Agreement (MECA). Of concern is the recent history pay equity settlement for health care assistants. As reported in the Nursing Review September edition (Nursing Review, 2017a) "nurses in the residential aged care sector have lost pay relativity with their unregulated co-workers".

The articles continue by discussing the narrowing pay gap with one commentator seeing this "as an opportunity to promote the advantages of employing a regulated, diploma-qualified EN over an unregulated HCA", (Nursing Review, 2017a). Further comments from the NZNO National Chairperson, Leonie Metcalfe, considered the possibility of more enrolled nurse positions being advertised being a positive outcome, with "employers seeing that they can get an EN working to the full potential of their regulated scope for around the same cost as an HCA, (Nursing Review, 2017a). Conversely, however, Metcalfe discussed some ENs might choose to be caregivers as it involved less responsibility and professional development requirements.

This raises several questions which need to be addressed. What affect will this have long-term on this sector? Will health care providers consider employing regulated staff instead of non-regulated and is this more economical or 'value for money'? Does the structure of the health workforce need reviewing and if so, what will the future health care workforce look like? Will health care providers support more formal education for its health workers to upskill? Can the sector accommodate workers having time away in order to gain higher education? How do local health education providers currently deliver education? Is this flexible for the needs of the industry?

A broader question outside the scope of this research includes how formal education impacts the health worker, their family/whānau and their wider social determinants of health. The Commission on Social Determinants of Health (2008) discusses the unequal distribution of social determinants (e.g. income, housing conditions, and employment) as described by Blakely and Simmers

(2011, p. 3) as fundamental to driving health inequalities. Marriot and Sim (2014) conclude in their report on indicators of inequality for Māori and Pacifica people's poor results are found in the measures of health, paid work and economic standard of living (p. 26).

Project management information

Focusing on characteristics of transdisciplinary research, the writer has identified the wicked problem (see TDR literature review) of healthcare and workforce inequities and the role of the Enrolled Nurse.

- What is known thus far:
- Ageing nursing workforce
- Recent wage increase for Health Care Assistants has impacted on the residential care sector financial viability
- Insufficient Māori nurses within the Waikato region
- Rural inequities for health service delivery
- Health conditions including respiratory, cancer and diabetes and hospitalisations show a higher prevalence of Māori to non-Māori in health statistics
- Wintec has received an outstanding report for the Enrolled Nursing programme. The programme is currently offered at the Hamilton City Campus only, but could this be made available at satellite campuses around the region or partially on-line?

Questions asked include:

Can Enrolled Nurses make a difference for the health workforce in the Waikato region?

What issues do stakeholders see for the future workforce?

How could Enrolled Nurses impact the rural sector, Maori services and the health targets for New Zealand?

What is the health sector employee profile?

How can the Enrolled Nurse education programme be delivered to support local learning, health inequities and workforce development?

For this TDR project, the writer will need to consider team membership and the inclusion of academic, funder and non-academic stakeholders. Pragmatic components will be sound facilitation, communication and collaboration. Constraints of participants and acknowledgement of differing world views and recognition of personal and professional limitations, stakeholder structures and individual discipline areas issues must be addressed and acknowledged. A realistic budget with consideration for unexpected events would need to be set. Support for the project and its direction has been gained from the industry partner and employer.

Collaboration and communication will be critical components, with partners from various interest groups throughout the region being invited to participate. This would include, but is not limited to, the industry partner - the Centre of Health and Social Practice (CHASP), CHASP Employers Engagement Group, Waikato District Health Board, Population Health, NZNO Enrolled Nurse Division, Māori Health providers, local care providers, rural groups, students – past, present and potential.

Discussion to establish the wicked problem will not be limited to the writer's thoughts and understanding but rather from dialogue with the group. Progress will involve team processes, consultation, meetings, reflection and review, and iteratively refining the issues. On a practical note, an adequate budget to ensure team support, administration of the project, research time and longevity of the project must be well-thought-out.

Disciplines to consider for involvement in this project are but not limited to, health, financial, nursing, health care providers, education, cultural, research, information technology, government, non-government, prospective students and employees.

In summary:

What is the wicked problem, and what are the potential uncertainties when considering a solution?

Why does the problem need to be fixed, and what are we hoping to achieve or improve?

What would we need to consider when doing so?

Systems knowledge, target knowledge and transformational knowledge will be required to adequately address these contemporary issues and construct a framework for inquiry and collaboration.

In consideration of the type of research methodology considered for this project, the writer's Literature Review on the theory of Transdisciplinary Research highlighted a broad range of methods were able to be utilised.

Clarification of TDR processes is best summarized by Wickson, Carew, and Russell (2006) who state there is no single methodology for TDR, and methodologies used in TDR need to respond to and be reflective of the problem and situation under investigation (p. 1049). The authors further state "transdisciplinarity is characterized by an interpenetration of epistemologies in the development of methodology", and the "dissolution of disciplinary boundaries is necessary for the construction of novel or unique methodologies tailored to the problem and its context" (p. 1050). This interpretation, however, does not provide a definitive framework for a novice researcher. Further investigation revealed it was acceptable to use traditional forms of research methods in TDR projects: mixed-method (Thompson, Owen, Lindsay, Leonard & Cronin, 2017), quantitative and qualitative methods (Krettek & Thorpenberg, 2011; Claasen, Covic, Idsardi, Sandham, Gildenhuys & Lemke, 2015). Leavy (2016) provided the most reassuring guidance by advising "any TDR design can use any method in pursuit of the research objective". Leavy continues by saying that these methods are only tools for data collection and "does not dictate whether or not the approach to research is transdisciplinary"(p. 54). Leavy provides a sense of comfort that one can still use traditional and more well-known methods for

research. It is more about the philosophy and process that defines transdisciplinary research.

In conclusion, there is little research available focusing on the varying roles of the Enrolled Nurse workforce, both regionally and nationally, the knowledge and skill level, understanding of their scope of practice and how the Enrolled Nurse role may be utilised to address inequalities, including rural inequities.

Further discussion and research is required to understand the potential nursing workforce profile in the Waikato region, the lack of Māori nurses in comparison to the population, and how the Health Care Assistant pay claim will affect the Enrolled Nurse employment opportunities.

Further research is also needed to consider how the Enrolled Nursing programme can be adapted to offer a more flexible delivery to support local and rural communities.

The potential mutual benefits for this project could be seen as an ample workforce, decreased rural health inequities, increased Māori and Pasifika nursing workforce, appropriately educated and marketable workforce who are work-ready and fit for purpose and increased health outcomes for consumers.

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Appendix V Further Narrative Comments from Research

This document highlights further narrative responses from participants of the research. The narratives are recorded in order of the main research document under the appropriate question heading.

4.2.10 what is your understanding of employment opportunities for Enrolled Nurses in your region?

- *Used to be more in other areas than where I am... when vacancies are advertised they are snapped up.*
- *Mostly roles seem to be in mental health*
- *I'm assuming a few vacancies. I haven't seen much advertisement for EN's*
- *Two opportunities just recently developed*
- *Only Mental health and older person's health*
- *None within the hospital setting*
- *No vacancies at XDHB, they are replacing with R/Ns*
- *I've seen a low number advertised but there are less ENs to less jobs*
- *Until last wage round I could not find vacancies within my field at DHB other care facilities offered very limited positions and salary offered was poor.*
- *Used to be more in other areas than where I am... when vacancies are advertised they are snapped up*
- *I don't know and I wonder if there might be more if people understood the scope and opportunities an EN offers.*
- *I am aware the DHB DoNs I have regular contact with have both undertaken to maintain and wherever possible increase the numbers of EN roles they have within their DHBs. I cannot comment about the private sector in this question.*

- *Roles are currently being considered and developed.*
- *A lot of EN's are being used to supplement HCA positions and not working to their full capacity or scope of practice*
- *Until last wage round I could not find vacancies within my field at DHB other care facilities offered very limited positions and salary offered was poor*
- *Only in aged care. Non at DHB*
- *I was offered the one permanent job advertised in XDHB. The DHB consistently advertises RN/EN positions but I was told by a CNM that they don't want ENs but are obliged to advertise it! A waste of our time and an insult.*

4.2.13 Participant Rated Understanding of the Enrolled Nurse Role by Other Health Professionals?

- *This is dependent on the health professional group. RNs generally have a good to very good knowledge. However wider disciplines do not. e.g. Medical*
- *New grads have little knowledge*
- *Was going to put no understanding, but maybe it's poor?*
- *Unaware of EN scope*
- *General knowledge good as they have been educated as to their responsibilities as RNs*
- *"I think that ENs are still having to blaze the way a little bit... it's also about having the employer thinking about how they can employ them... and it is about explaining the differences to different disciplines, e.g. We had a Medical student who had no idea what an EN was".*
- *I don't think MDT members have a good understanding of what the EN scope is unless they have worked with them for some time. So new junior doctors might not be aware.*
- *This may be wishful thinking, but each RN must speak about direction and delegation of Enrolled Nurses in their professional development portfolio.*
- *EN not used in our facility*
- *They don't understand the range of our scope*

- *I am constantly standing up for my scope and explaining why I can't do certain tasks and work independently in certain areas*

4.2.14 How does the Enrolled Nurse role differ from the Health Care Assistant role?

- *Able to provide nursing assessment skills, medication administration, observation taking, nursing opinion to medical team, writing in notes*
- *A moderate amount- can complete assessments and care planning, can complete observations. more clinical knowledge to the HCAs*
- *The Role in the G P's is quite different, and I think health care assistant is not suitable for this work A wide knowledge base is essential and to be regulated and accountable for standard of practice is essential*
- *They work under RN doing everything*
- *We can do more and have more responsibility*
- *Similar roles to the HCA but also the RN*
- *The EN can plan care and take a patient load, can give oral meds*
- *An enrolled nurse had undergone training about medical conditions, their treatments as well as medicine management, where as an HCA has no training*
- *HCA are unregulated*
- *EN is a regulated, qualified role*
- *We are nurses with a totally different set of skills*
- *Enrolled Nurses have an 18-month training, are skilled and affiliated to a Nursing council*
- *In responsibilities legally and through scopes of practice*
- *They are regulated by a governing professional body - Nursing Council as opposed to HCAs who are not*
- *Enrolled nurses are allowed to take far more responsibility as regards to patient care and management. Can write care plans, document patient care in the medical notes*
- *Responsible and accountable for all actions as a registered health professional.*

- *I think this very much depends on the area and the knowledge of the staff*
- *Enrolled nurses on my ward to everything except give IV and PICC meds, HCA have no responsibility in patient care*
- *ENS have a greater understanding of complex conditions and appropriate management, including complex families*

4.2.15 How does the Enrolled Nurse role differ from the Registered Nurse role?

- *RNs have wider scope of practice*
- *Not used at our facility (Enrolled Nurses)*
- *Enrolled nurses contribute to assessment and care planning etc. as listed in Q4 and Registered nurse create and are responsible for items as listed in Q4*
- *I don't do IV med, plus don't look after post op joints*
- *IV medications, care planning, assessments*
- *RNs do the IVs and more of the palliative care in my area of work*
- *They can do wound assessments and palliative pt. and have to be responsible for the EN and do on call*
- *My work place is aware EN's can't initiate seclusion and work in HDU areas without An RN to direct and delegate (after many a time of me speaking up about my scope)*
- *Variances and limitations in scope of practice.*
- *ENs do not complete assessments on new undifferentiated patients. They work alongside the RNs, helping with assessment related tasks e.g.Obs, bloods ecgs etc.*
- *A RN is responsible for managing medically unstable and/or advanced care interventions of Patients such as insertion of nasogastric tubes, pacemaker monitoring, TPN or IV opioid medication etc. where an EN can only look after medically stable patients that do not have advanced nursing interventions.*
- *No IV administration, they have to work under "supervision" of RNs, no controlled drug administration, RNs need to co-sign their notes*

- *ENs are not in charge Don't give IV, PICC ABS*
- *We do exactly what the r/n would do only not the iv antibiotics or CVAD*
- *They can't do formal, written assessments or do any IV meds, less scope for career advancement*
- *Same as RNs except ward management and IV medications. Working under direction and delegation of RNs*
- *RNs only can complete comprehensive nursing assessments and formulate nursing care plans. ENs can input into these activities but cannot undertake them. ENs must always have some form of oversight of their care from an RN via delegation or direct or indirect supervision. In some practice settings ENs can manage teams of HCAs however they still legally require a degree of RN support.*
- *I guess the question to ask is how does direction and delegation work with ENs and RNs. It is important that ENs clearly understand direction and delegation and understanding the limits of that in terms of the RNs responsibility for assessment and diagnostic reasoning and again in terms of evaluation, assessment and diagnostic reasoning about evaluation*.

4.2.16What opportunities do you see for Enrolled Nurses in healthcare?

- *To work in a lot more specialities and health care settings*
- *Not many for new ENs, they should be more widely recognised as team members, particularly now their scope of practice has been widened.*
- *Care planning (alongside RN), med management, assisting with personal cares*
- *The opportunities are there if you want to take the time to reach out and do more education*
- *Could participate in assessment roles*
- *Good changes happening*
- *Taking a patient load, assessing, contributing to care planning*
- *Very little these days*
- *More outpatient clinics*

- *Things are changing within the ENs scope and I believe this will open more opportunities for the EN nurse.*
- *More wards are employing EN's*
- *Maybe working in rest homes rather than public hospital*
- *Theatre scrub, ward based basic nursing*
- *I suspect that the future will generate many opportunities for enrolled nurses*
- *EN can be better utilised all over the healthcare disciplines.*
- *At the moment there are not a lot of opportunities for enrolled nurses in the Waikato. More opportunities in other locations around New Zealand/Australia*
- *Complimentary role to RNs of all scopes and lead role with unregulated staff e.g. health care assistants*
- *DHB dependent from my observation- in SDHB there are increasing opportunities - from older adult/acute care in med/surg /mental and primary health*
- *More areas of health are going to start hiring EN nurses*
- *Being able to specialise*
- *Very limited*
- *Very little*
- *Not huge opportunities like RN have. Limited to ward settings of Ortho, Rehab, Medical, Aged Care*
- *Working in specific areas to gain greater experience of knowledge in specialised areas*
- *More opportunities have arisen in the last 6 years since I qualified but I think it could be better*
- *Opportunities don't just happen you have to seek to find.*
- *Competently taking patient loads of stable patients.*
- *I think that there are cares which EN's could do with back up that they aren't encouraged to do. I think that there is a difference between newly registered EN's and EN's who trained in the old system. I think that some of the older EN's could mentor some of the newer ones.*
- *Doing Education especially around illness medication triggers and management of these.*
- *Decreasing due to minimal employment opportunities in X area.*

- *In the operating theatre setting, there is minimal difference*
- *If you are looking forward and trying to make some changes, start with the education providers..... They need to have a good understanding of what ENs can do..... It was hard to even get placements.*
- *Second tier nurse. Varied depending on whether they have continuous education and support from their employers*
- *Not a great deal. Opportunities that I have seen have been directed towards RNs*
- *Areas that have low acuity patients could utilise ENs*
- *Great potential in some areas in the clinical setting but probably not as appropriate in the Emergency and Acute areas where a lot of responsibilities for an RN is expected*
- *Providing education and assessment to provide a healthy outcome on an individual basis*
- *Continuing cooperative delivery.*
- *More opportunities for further scope of practice development in some areas*
- *They have ability to fit anywhere within system*
- *A huge amount in aged care, if they are paid adequately. In the facility I work in, we have 2 RN's on in the AM and PM, 1 could easily be an EN, they have an RN to work under etc.*
- *On the ward I work on the charge nurse is keen to have a collaborative team of trained nurses looking after the patients and to move away from health care assistance to provide care*
- *To work at the top of their scope*
- *Ability to branch out to primary health care services*
- *Opportunity for change and a lot more responsibilities and involvement in nurse duties, as well as patient care.*
- *Enrolled nurses would be able provide client care in a variety of settings with the direction and delegation of a Registered Nurse. They would be*
- *Good in the company I work for, but hard to obtain employment elsewhere*
- *Population Health, health promotion and leadership are areas I have developed*
- *They need to be given a great deal more responsibility we are just as capable*

- *If given the chance, we are very valuable to the health workforce*
- *Almost any opportunity. I work under standing orders*
- *Hopefully positive in the future*
- *Don't want in age care, prefer care staff*
- *Very little in hospital setting, we are basically being replaced by HCA or RNs*
- *Huge, they are very skilled and have more time for specific tasks and treatments as do not have a patient load. Therefore, they can carefully complete a task e.g. access portacath, without pressure to move to next thing.*
- *Only if blinders are taken off the stake holders as to what we can do.*
- *Lot's if the NZ Health system would allow for more changes and increased study such as the Advanced Enrolled Nurse course which currently runs in Australia*
- *Enrolled nurses are often overlooked and can be greater utilized to improved staffing ratios with min budget*

4.2.17 What challenges do you see for Enrolled Nurses in healthcare?

- *To be given more autonomy in certain areas of nursing, some organisations have their own what EN can/cannot do policies*
- *No career progression*
- *Working within scope of practice and being prepared to take delegation for RN's*
- *A lack of knowledge across the board regarding their level of knowledge and to best utilise their services.*
- *Other healthcare professionals not understanding the EN role*
- *They are too restricted for the experience/skills they have*
- *Enrolled nurses may face challenges relating to professional responsibilities and expectations*
- *I feel it would be frustrating when it came to giving medications they're unable to give i.e. any IV drugs.*
- *Limited opportunities to work in clinical and assessment areas.*
- *Limitations in their scope of practice*

- *Acceptance as independent clinical entities*
- *Not a great ability to expand roles as there are restrictions to their scope of practice*
- *We are all getting older, little opportunities in DHB*
- *Less chance of developing into specialist areas*
- *Misunderstanding of our scope of practice from other health professionals*
- *Their role is limited as regards to management and career structure*
- *To be taken seriously, for registered nurses to allocate more challenging*
- *People are confused about the role of an EN and find myself always referring to the new scope of practice*
- *Lack of courses to further knowledge*
- *Working out work plans and positions that suite the EN scope of practice. If the time is put into this planning ENs can work safely with organised direction and be a real asset to the Patient's, RNs and Drs.*
- *To be given Opportunities by Senior Management*
- *There aren't many employment opportunities*
- *Other professionals understanding the position of the Enrolled Nurse*
- *Lack of understanding of scope, and the training ENS do*
- *Trying to keep jobs, very little opportunities other than rest homes*
- *Employment within DHB*
- *Employment*
- *Limiting our scope from what we can do*
- *Not being understood by RNs or Doctors*
- *Difficulty with other health care professionals in regard to lack of understanding of the EN scope of practice*
- *Working out of their scope of practice*
- *Understanding of their scope of practice*
- *Finding jobs in non rest home settings*
- *The challenge is more positions available and an increased understanding of their scope of practice.*
- *Convincing employers of their worth. Keeping their profile up and ensuring there continues to be EN positions within Healthcare generally*
- *Challenges to perform outside their scope of practice by employers.*
- *Understanding of their role*

- *The different barriers, RN not knowing the scope of an EN or understanding skill sets*
- *Misunderstood and underrated*
- *Being recognised for our skills*
- *Getting other employers to see the benefit in employing ENs*
- *Over time when we become more appreciated for what we are and what we do our opportunities will grow.*
- *Working at the top of the EN scope of practice.*
- *The scope of practice has been expanded, which is to the advantage of the nursing team*
- *Challenges are brought upon oneself; we have a scope to follow.*
- *None, we work hard with no rewards or enough pay*
- *Others not understanding our scope therefore not give us enough responsibility*
- *Making their scope known to registered nurses. It's blurry*
- *Justify their role*
- *A ceiling to the type of employment they can gain e.g. couldn't be a CNM, CNE etc.*
- *Competition for positions by Senior RNs*
- *The pay. Lack of knowledge from other staff as per their scope of practice.*
- *Being recognised!! getting a decent pay scale*
- *Being allowed to extend their scope*
- *Lack of visibility and ongoing raining of E/N. Scope not well understood or acknowledged.*
- *RNs knowing our scope of practice therefore knowing their own*
- *I think challenges are that other healthcare professionals do not know our scope of practice and think we are more like a higher qualified healthcare assistant*
- *The understanding of their scope of practice within the health teams*
- *Keeping are pay rate at an acceptable level above care givers*
- *Being limited to HCA roles because of little understanding of our scope*
- *Being understood by our peers*
- *Being taking advantage of by RN*
- *Having their practice underutilised and not respected for the knowledge that they have.*

- *Age and retirement. We are a dying vocation. The need in the past twenty years has been to limit our scope into long term care.*
- *Lack of knowledge by RNs about direction and delegation. I also think that ENs are hampered by ill-informed healthcare professionals and there is an element of protecting their 'patch'.*

4.2.18 How do you think the recent pay equity changes for Health Care Assistants have affected the role of the Enrolled Nurse?

- *Possibly make a great difference in the private sector, but in DHBs not a lot*
- *MECCA has made some settings more attractive/ Primary health/ Iwi providers and Older adult health cannot compete*
- *Employers may opt for HCAs and Registered nurses due to lack of understanding of the role*
- *We are way behind what a RN after 7 years in the same area gets paid, and we do a very similar work load / expectation*
- *All the responsibility we have with patients' lives verse HCA role we are underpaid*
- *Still cheaper to employ HCA's then other trained staff. However, they still deserve a pay increase*
- *The difference between ENS and HCA is not much. ENS scope is far greater*
- *A few enrolled nurses would prefer to work as an HCA, no responsibilities.*
- *We still do not have pay parity*
- *A lot as they get nearly as much as us at present for less responsibility*
- *Not sure as I am on an individual contract*
- *Unfair wage for enrolled nurses in comparison to the HCA OR care giving wages*
- *HCA'S are now getting paid close to the starting rate at the DHB for EN's*
- *The Enrolled nurse is still the go-to person HCA should and could link with together they could work as a unified team*
- *A lot due to the pay gap becoming the becoming closer or no difference*

- *No pay increase for competent level on PDRP at DHB's and that training is on top of our EN training – Unfair*
- *Pay equity have been long overdue, however this has not translated well for the EN's resulting in HCA's now earning more than the EN's in some cases*
- *The pay disparity is more apparent. Enrolled nursing is poorly paid for their experience and qualifications. We did a formal education with a qualification, a registered number and a certificate. My original qualification was as a registered community nurse*
- *Some EN could earn more being an HCA without any of the responsibility*
- *EN's have under gone tertiary education which they have had to pay for personally and they are paid barely more than an unqualified HCA which is not acceptable.*
- *All people can be employed to fill gaps without knowledge or training.*
- *I believe there are HCAs getting more pay than ENs. This is not acceptable, nothing against HCA but they are not regulated they do not need to update skills or education and they have no formal training, I believe there is the ACE programme but still this is not a nursing training.*
- *I personally don't think it is fair to us ENs, as they have a job description, not professional responsibilities, that goes along with the hard work to earn our degree's*
- *As an EN I don't feel that my work is acknowledged for the responsibility that we carry compared to a HCA*

4.2.19 Working within the Enrolled Nurse scope of practice, what settings could an Enrolled Nurse be employed in?

- *Mental health, Theatre scrub, Medical wards with high ADL needs e.g. OPR or General medical*
- *Private hospitals!*
- *We have skills to be able to fit into all of these places*
- *Anywhere where there is registered medical professional available to report to*

- *All of the above, with the correct training under direction delegation we can work anywhere*
- *Anywhere that will provide ongoing education ad part of a contract*
- *Operating theatres*
- *Mental health*
- *An opening in district nursing for ENs*