Nurse Practitioners' Practice and their Impact on Primary Health Care Delivery

SCHOOL OF NURSING
FACULTY OF EDUCATION, HUMANITIES AND HEALTH SCIENCE
EASTERN INSTITUTE OF TECHNOLOGY
NAPIER
HAWKE'S BAY

Associate Professor Clare Harvey
Dr Elaine Papps
Ms Jennifer Roberts

EIT
Eastern Institute of Technology
Private Bag 1201
Taradale
Napier
New Zealand

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Executive Summary

This study is underpinned by a scoping project that was undertaken in 2011/2012 by the principal researcher who sought to examine how Nurse Practitioners (NP) position themselves within the changing health care landscape that was brought about by the health reform strategies in Australia. Whilst the role of NP was central to the research, it was not the focus of the research; rather it examined the contribution that NPs make to health care delivery through their practice and the partnerships they create.

Based on the analysis of data from the scoping project, a survey was developed to find out whether NPs in the New Zealand (NZ) context contribute to comprehensive care regardless of practice setting; comprehensive in this sense meaning the development of a model of care that crosses the acute/community/specialist boundaries. Also important was whether care was inclusive of managing those social determinants that affect health outcomes and are key parameters for measuring service provision as described in health reform strategy, policy and discussion (Gilson, Doherty, Laewenson, & Francis, 2007; King, 2001; Ward, 2010).

The motivation for this project was the ongoing evidence describing spiralling health costs and the global escalation of chronic and complex health care demands that has forced many health systems to explore different delivery models of care (World Health Organisation, 2008). With this, a plethora of non-medical roles such as physicians assistants, community health workers and pharmacists as non-medical prescribers, have emerged to take up the gaps in care, with cost containment being cited as a measured outcome (McKinlay & Marceau, 2012; Metherell, 2008). Yet, the role of NP that has been in existence for some 50 years, has not been so eagerly embraced as one of those non-medical roles that support cost effective care, despite its worth being identified (Fairman, 2008; C. Harvey, Driscoll, & Keyzer, 2011; Keyzer, 2001; Kilpatrick, Lavoie-Tremblay, Lamothe, Ritchie, & Doran, 2013; Kuntz, 2011; C. Turner & Keyzer, 2002). In this mix, the push for health systems to focus on health promotion, disease prevention and wellness is paramount, all of which nurses in advanced practice roles are shown to augment outcomes (Schober, 2007; Stenner, Courtney, & Carey, 2011). With enhanced outcomes, comes the achievement in the equity in care and a more streamlined access to care, because NPs can take on much of the routine care of patients, as well as the co-ordination of care across acute and community settings, a situation often associated with chronic diseases.

Wong et al., (2011, p.1) state that “one important goal of strengthening and renewal in primary health care is achieving health equity, particularly for vulnerable populations”, and it can be argued that NPs are well placed to support equity in care through the inclusion of primary health care (PHC) principles in their practice, because of their traditional socialization as nurses that allows them to focus on the individual and their family in maintaining or encouraging as healthy a state as possible regardless of situation (Henderson, 1967; Keyzer, Hall, Mahnken, & Keyzer, 1995; Kutzleb & Reiner, 2006). Studies have shown that advanced practice nurses improve the continuity of care in specific population groups (Manthorpe et al., 2012; McKinlay & Marceau, 2012). This view was further amplified in one Australian Master’s programme in which NP candidates were demonstrating an ability to weave a wellness approach to care through the role they were developing regardless of the context of their practice.

The New Zealand study comprised of a survey, which was based on the Australian pilot study and a Results Based Logic Model for Primary Health Care (Browne et al., 2012; Watson, Broemeling, & Wong, 2009). The anonymous survey was sent out electronically using Survey Monkey™ to 66 NPs who were members of the College of Nurses Aotearoa (NZ) Inc. Respondents were also invited to participate in an interview at the end of the survey. Of the surveys sent out, 53% responded to the survey with 23 consenting to an interview. Whilst these numbers are small, the result does represent an estimated 25% of the estimated 120 NPs registered in NZ at the time the survey was sent out. Regardless of representation the results can only be reported as statistically suggestive, based on the small numbers involved, however, the interview discourses do provide clear insights from NPs working in practice, the value of which should not be discounted.

Summary of Findings

Based on the findings, the following suppositions are précised. Further discussion on these points is provided throughout this report.

1. NPs are generally 46 years and over.
2. Social determinants of health significantly influence the approach to care, the effects of which are demonstrated across all population groups in New Zealand. Within this environment NPs,
    a. are demonstrating that they work in a wellness model, regardless of practice setting;
    b. believe that they contribute to PHC through enhancing access to care by supporting a more comprehensive approach to care that focuses on a 'whole patient approach' within which they understand the diversity of care needs in what can be increasingly regarded as an ageing and chronically ill population;
    c. articulate an ability to co-ordinate care using a broad range of referrals to appropriate allied health and medical professionals and;
    d. demonstrate an integrated approach to care which is not confined to community/acute or health funding boundaries.
3. NPs are generally well accepted by patients and clinical teams, yet there is restrained acceptance by some nursing colleagues and organisational management.
4. NPs believe that they contribute to clinical and financial efficiencies within their health care service/organisation despite the fact that in some cases their budget and organisational support was either temporary, fixed term or limited.
5. NPs believe their roles are effective and sustainable.
6. NPs have identified the inconsistent planning, implementation and ongoing support for NPs roles with little strategic planning being identified.
7. NPs identified that the support for them to maintain their professional competence, a requirement of registration, is individually based and not nationally driven; nor is it equitable when reviewing other professions' support from national workforce funding.
8. NPs articulate some professional isolation, articulating that their role is sometimes not clearly defined within the organisation or nationally.
9. There is a paucity of research around the clinical and financial value of the NP role. NPs are frequently not given professional development time to evaluate their role, nor is it consistently undertaken when newly established.

10. NPs believe that national leadership for NP in regard to overall development and sustainability is variable, both within the nursing profession and Workforce New Zealand.

Authors

Associate Professor Clare Harvey, Postgraduate Programmes Co-ordinator Health Sciences, School of Nursing and School of Health Sciences, Eastern Institute of Technology
Dr Elaine Papps, Senior Lecturer, School of Nursing, Eastern Institute of Technology
Ms Jennifer Roberts, Assistant Head of School, School of Nursing, Eastern Institute of Technology

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Ms Vicki Klein (Master of Nursing student) undertook all the interviews for this study.

Professor Annette Browne (University of British Columbia) is a key author in the information related to the primary Health Care Strategy in Canada, and was part of the pilot study that informed this research. She has also been a reference person in relation to the framework that was used to analyse the data in this study.

Emeritus Professor Dirk Keyzer (The University of Sydney) and Professor Trudy Rudge (The University of Sydney) were a part of the pilot study in Australia that has underpinned this research.

Publications and Journal Articles from this Study

Harvey, C., Roberts, J., Papps, E., Rudge, T., & Keyzer, D. (2014, April). *Assessing the contribution of Nurse Practitioners to the provision of primary health car*e. Paper presented at the RCN International Nursing Research Conference, Glasgow, Scotland.

Harvey, C., Papps, E. & Roberts, J., (2015). *In press*: The Paradox of Care: Nurse Practitioners and Health Budgets. *Nursing Standard, Primary Health Care*. London, United Kingdom.

Background

It is a well-documented fact that populations are becoming sicker and are presenting with more than one condition when seeking health care, to the point where the situation has been identified as an epidemic (Sequist, Von Glahn, Li, Rogers, & Safran, 2012; World Health Organization, 2008). This has created a situation where current health care funding no longer addresses the needs of a changing illness/wellness landscape. Many countries around the world have realised this so that there is now a groundswell of change occurring where PHC has become the focus of attention, with an emphasis on the management of chronic illness in the community and the encouragement of healthier lifestyles to reduce the morbidity of chronicity. The World Health Organization has supported this by developing global processes and plans that will support a changing health system for countries willing to embark on such a major change (World Health Organization, 2008). Closer to home the PHC Strategy in New

Zealand and the PHC reforms in Australia were initiated following reviews that identified the need for change in these respective countries (King, 2001; Ministry of Health, 2001; National Health and Hospitals Reform Commission, 2009).

Changing a nation's approach to health care delivery is no easy task and it is well known that transformation of this magnitude takes years to achieve. With change comes the 'noise' associated with alterations to budgets, health workforce mix and skill, and organisational locations of services and insecurity that arises with changing professional and organisational boundaries. It is also a well-known fact that whilst national policy will outline what needs to change there is always a parallel practice that perpetuates what has 'always been' (Moore, 1970; Porter-O'Grady, 1999; Productivity Commission, 2005). In health care the traditional seats of power has been the medical physician and the acute care sector of health care delivery (Harvey, 2010; Mckee, Ferlie, & Hyde, 2008; Reeves et al., 2008; Roxon, 2008; Smith, 2009). The move to community based services that support alternate models of care where a non-medical health professional is now the principal manager of care is a significant paradigm shift and one which will take more than national policy to change to establish. Sometimes this shift comes with a combined approach of the non-medical professionals themselves challenging the traditional clinical and professional boundary, together with increasing community awareness of the need to change the way they are able to access health care services. This was highlighted by Braunstein & Lavizzo-Mourey, (2011 p. 2043) who stated;

> "There is growing realization that where people live, work, learn, worship, and play has more impact on how well and long they live than what happens in the doctor's office. It is also evident that over the past forty years, the fields of community development and health have typically operated on separate tracks. The health sector has traditionally focused on people and their medical needs, and not necessarily on their surroundings or the fundamental social and economic determinants of their health. In community development, the focus has been on strengthening the capacity of people to live better, and this involves improving their physical environment."

Gilson et al., (2007, p. xii) state that a shift towards equity in a changing health care environment needs to factor in processes that enable a more socially equitable balance of power and social resources. They suggest an increase in community involvement and interaction in determining health needs in which governments "bring professionals into roles that support social mobilization" to support health care quality, equity and accessibility. This needs to include the ability to "monitor the performance of health systems against social priorities" that will "draw attention to needs and inequities in resource allocation". This monitoring should include non-medical alternatives within the community setting.

For the purposes of this report we focus on NPs who, although they have been introduced to the health system, have not routinely participated in, or been directly encouraged to become involved with, research that measures health system outcomes. Furthermore, nor have these measures really focused on access and equity because those people accessing the system have not been central to that care (Gilson et al., 2007; Ward, 2010). It has long been argued within the nursing profession, that NPs can support equity in care through their wellness based position in delivering that care; however, this has not been well researched and therefore in New Zealand and Australia have not fully factored

this into healthcare services. Whilst this is changing in Australia with the inclusion of NPs into Medicare (Medicare Australia, 2010) that supports a more equitable community practice approach both professionally and financially; and the change to approach of care through the introduction of Primary health care clinics in New Zealand (King, 2001), the imbalance of professional power is still evident. This is largely attributed to that fact that nurses are traditionally the silent workforce in health care (Buresh & Gordon, 2000; Harvey, 2010; Kuntz, 2011). In this silence, nursing research has lagged behind many other professions (Harvey, 2011; Kuntz, 2011) with nurse led studies examining nursing roles from a qualitative paradigm specifically around client satisfaction. Whilst patient satisfaction is an important element of review it does little to examine the clinical or financial outcomes that have become important to a healthcare system when seeking cost effectiveness whilst maintaining clinical effectiveness (Finlayson, Sheridan, Cumming, & Fowler, 2012; Gagan & Maybee, 2011; Wolosin, Ayala, & Fulton, 2012). Those projects that have studied NP contribution to clinical outcome tend to focus on budgetary parameters such as reduced length of stay or comparisons to other health care roles through measurements related to quantitative data such as number of diagnostic tests used or throughput of patients in a service (Horrocks, Anderson, & Salisbury, 2002; Manthorpe et al., 2012; Ouwens, Wollershiem, Hermens, Hulscher, & Grol, 2005; Schober, 2007).

The emphasis of these cost focused parameters belies the fact that once a person is ill, health care is important but prevention is better (Adler, 2010) acknowledging the fact that health care services in fact "play a very small role in the wellness of a person (10 percent) in contrast to the social circumstances, environmental exposure, and behaviour that are estimated to account for 60 percent of the risk of premature death" (Braunstein & Lavizzo-Mourey, 2011 p.2043). Identifying active participation in supporting equity and access to care therefore is an important step in identifying the worth of the NP role in any health care system that is moving towards a primary health care strategy.

The Pilot: Setting the Study Stage

In order to consider the significance of a national survey of NPs in exploring their contributions to primary health care, a pilot project was undertaken in Australia. The study used the Results Based Logic Model for Primary Health (RBLM) (Broemeling & Watson, 2009; Watson et al., 2009) to map the contribution NPs are making to Primary Health Care regardless of infrastructure and resources within which they are working and/or have been provided.

A results-based logic model "identifies the linkages between the activities of a policy, program or initiative and the achievement of its outcomes. It succinctly clarifies the set of activities that make up a policy, program or initiative and the sequence of outcomes that are expected to flow from these activities. As such, a logic model serves as a 'roadmap', showing the chain of results connecting activities to the final outcomes and, thus, identifying the steps that would demonstrate progress toward their achievement" (Treasury Board of Canada, 2008).

To trial the utility of applying the RBLM the interviews of six Australian NPs were analysed. The participants were Registered Nurses (RN) who had recently been endorsed[1] as NP, who had commenced their NP practice, and who had graduated from one master's degree for NPs between the

[1] In Australia NPs are RNs endorsed to practice as a NP. In New Zealand NPs are placed on a separate register to RNs.

years of 2009 and 2011. Twenty two graduates were invited to participate. Fourteen consented for interview but eight were eliminated because although they were endorsed as NPs, they were not working in a NP position. Interviews were conducted on the telephone and questions were open-ended thus allowing the participants to describe their practice in their own way. Interviews were recorded and then transcribed and the texts were then analysed against the RBLM parameters with themes and references being examined using a Critical Discourse Analysis (CDA).

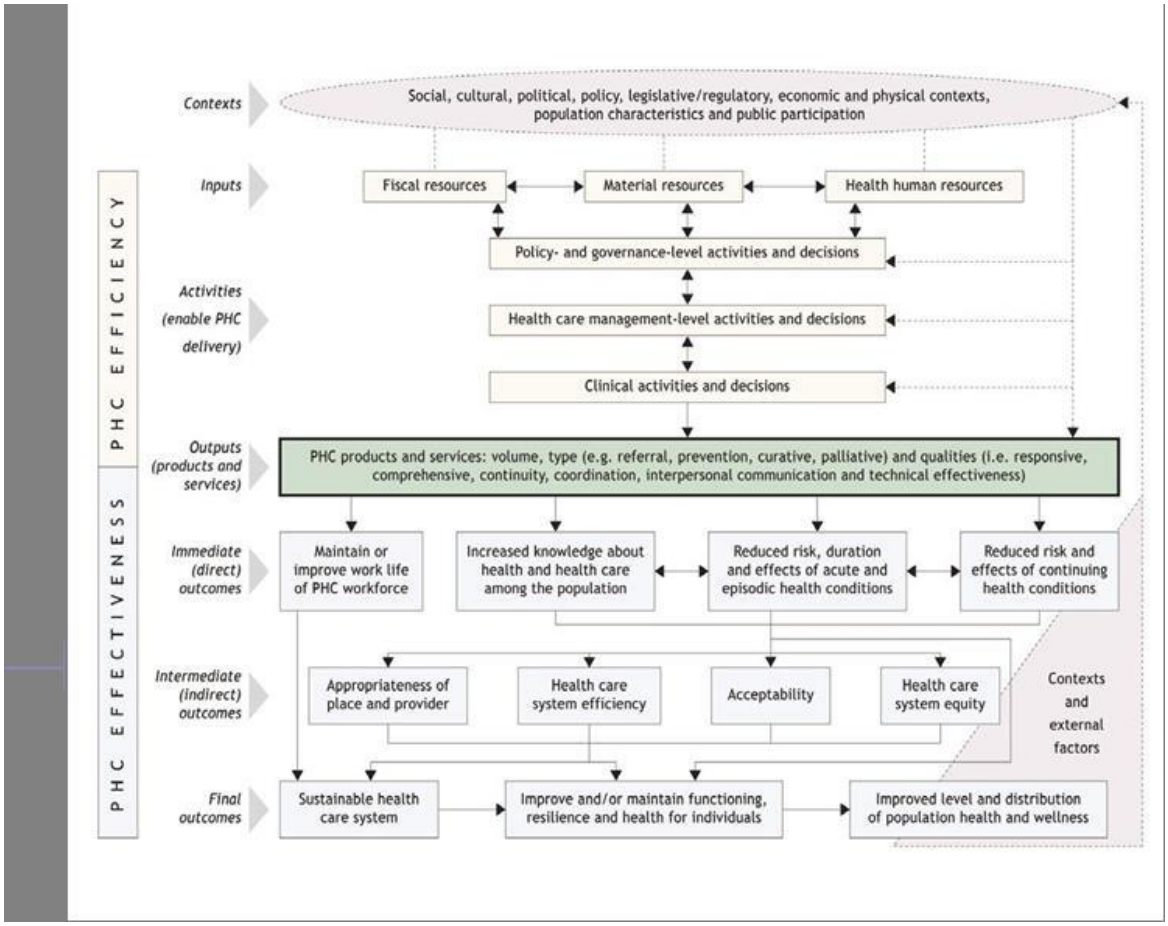

Figure 1: Results Based Logic Model (Watson et al. 2009, p. 38)

The RBLM provides key indicators that are sub-divided into PHC efficiency and PHC effectiveness (Watson, Broemeling, Reid, & Black, 2004; Watson et al., 2009). PHC efficiency is measured by the contexts of the healthcare service which includes the population, geographic, social and cultural environment, and the supports (inputs) for that practice which broadly fall under the categories of fiscal, material and human resource management. The policy and governance of the service provides additional evidence as to the efficiency of a service by demonstrating commitment and support to PHC delivery. PHC effectiveness examines the outputs of practice by demonstrating the quality of service provision, and its responsiveness and comprehensiveness through immediate (direct outcomes), intermediate (indirect outcomes) and final outcomes that seek to sustain a healthcare system or improve its functioning. According to Wong et al., (2011, p.2) “as one moves along the outcome continuum from immediate, to intermediate to final outcomes, the corresponding degree of attribution from PHC diminishes”. Using the discourses of the NPs, we categorized information into

the components of the RBLM to identify how participants were contributing to PHC, as both covert and overt activities in their clinical practice.

Examining the discourse of the participants and how they shared their knowledge is as important as comparing data against a valid management/clinical model. Whilst the RBLM informed the data analysis, as a pilot with a small number of participants using interviews as the only source of data collection, the need to explore what participants said and how they said it and then compare it against policy and contemporary views, was as important as measuring information against the RBLM. Language forms the thread through which the various social orders accept their social status as inevitable, natural and/or necessary (Fairclough, 1995; Scollon, 2001b; Van Dijk, 2004; Wodak, 2001). Language, as the spoken and written word, creates the social discourse through which people make sense of things and shape the understanding of themselves and their capacity to distinguish what is of value (Fairclough, 2001; 2012). Moreover, language as a social practice is in a dialectical relationship which "socially shapes", but is also "socially shaped" by all players within society. CDA thus explores "the tension between these two sides of language use, the socially shaped and socially constitutive" (Fairclough, 1995, p.131). In other words, as Fairclough (2012, p.4) contends, "CDA combines critique of discourse and explanation of how it figures within and contributes to the existing social reality, as a basis for action to change that existing reality in particular respects". CDA allows for the exploration of human phenomena that do not lend themselves to quantitative methods, because they cannot be controlled by reducing variables to measurable means (Carspecken, 1996). It assumes thought to be fundamentally mediated by power relations and to be socially and historically constituted, which means facts cannot be isolated from the domain of values or separated from social relations (Carspecken, 1996; Scollon, 2001a).

The aim of the pilot study was achieved, and that was to identify the use of the RBLM in measuring the contribution that NPs have on improving access to care. Although the RBLM has been used within a PHC framework, it has not been adapted for use within a specific professional base or model of care; rather it is a broad approach to measuring systems. Its use in measuring one profession's involvement in PHC is therefore an innovation. The use of CDA to further examine NP discourse supported the use of comparative organisational and legislative documents to show how there remains a mismatch of what is determined support for NPs to what actually occurs in practice.

This pilot was a small sample of NPs on which to test a framework and so results were not rigorous enough to draw any conclusions, although it did provide a snapshot of the research potential in approaching the examination of NP practice using this model. The data raises an alert to the system inequities of a health structure that, in spite of health reform, continues to block the promise of enhanced equity and access to health care by the very funding structure provided. It identified the need to expand this study to include a Trans-Tasman survey in order to obtain a larger data base and to include a wider survey from Australian states and territories.

It is against this background that we now focus on the experiences of NPs in New Zealand to identify their contribution to care provision.

The New Zealand Study

A descriptive survey was developed using the RBLM key parameters to measure both the effectiveness and the efficiencies demonstrated by NPs in their responses[2]. Responses from the survey and the interviews were then analysed using CDA. Statistical data was entered into SPSS Predictive Analytics Software Package™ (IBM) and the qualitative data was entered into NVivo Qualitative Data Analysis™ for analysis of general trends and themes from which to work. Information was then mapped against the RBLM reflected against comments that participants made in both the comments action of the survey and in the interviews.

The NZ study sought to measure the impact of NP care on the community in which they work and to explore the partnerships that NPs develop across health and community boundaries that allow this to occur. Central to this was how their model of care supported access to care. Using this information the study sought to clarify the role that NPs play in lessening system inequity, improving access to care, and enhancing existing care provision.

Participants for this study were drawn from those NPs who were members of the College of Nurses Aotearoa (NZ) Inc.[3]. At the time of the study, there were an estimated 120 registered NPs in New Zealand, although this number could not be confirmed at that time. There were a total of 66 members identified on the College's website. The College was used as names and emails of NPs were freely available to the public through the website. Although the numbers are small, the researchers considered this to be representative of NPs in NZ, the number being more than half of the NPs practising in NZ.

NPs were contacted via email and invited to participate in an online anonymous survey which allowed for both statistical data using a Likert scale questionnaire through Survey Monkey™, and for free text to be entered which allowed for respondents to provide further discussion on the questions. This supported a more in-depth analysis on the views that participants offered. At the end of the survey, participants were invited to participate in an in-depth interview. The survey was emailed out to all NP members of the College.

The surveys were anonymous with consent being accepted as submission of the survey electronically into Survey Monkey™. Those participants who wished to be interviewed completed a separate section on the survey which provided information on the interview process, and then provided a tick box section for consent. Initial consent to interview was the provision of name, email and telephone contact information. This consent was further clarified on commencement of the interview. Participants were then contacted and a recorded telephonic interview was arranged. Interviews were undertaken by an independent research assistant who was not known to the participants. This was done to increase the objectivity, given that all three researchers involved in the study were known to some of NPs. Participants were also able to request a copy of the interview transcript.

[2] Appendix 2: Project Survey
[3] Referred to from here onwards as "the College"

Ethics was approved through the Eastern Institute of Technology (EIT) Research and Ethics Committee and EIT research funding was granted in order to undertake and transcribe the interviews, and to analyse the data.

Findings

Surveys were anonymously emailed out to 66 NPs from the College website. The Survey Monkey™ site remained open for six weeks with a reminder email being sent out two weeks prior to the closure of the study.

Of the 66 surveys emailed out, 35 (53 per cent) responded and based on the estimated total number of NPs in NZ (120 NPs), this represents 25 per cent of the national NP voice. Of these 23 consented to interview, of which 16 were interviewed. Interviews ceased once saturation of data was achieved. Each interview had a set question list[4] from which participants were able to answer in their own words and in own time. Participants were given the space in the interviews to expand on their points and views. Interviews were recorded digitally and then transcribed using an EIT endorsed transcribing company.

The survey was divided into sections corresponding with RBLM parameters. Comments from the survey and the information from the interviews was then analysed using CDA, comparing information in the analysis with various policies and directives relevant to NZ health delivery and nursing. All documents used in analysis were freely available on the World Wide Web.

Data from the survey were analysed in three ways:

1. Researcher based thematic analysis
2. The use of the SPSS for statistical analysis
3. NVivo to explore themes
4. Analysis of qualitative data using CDA

The collated themes were used to explore comments and interviews using CDA, examining the information against the statistical data mapped against the RBLM. The following table summarises the collated themes.

[4] Appendix 1: Interview questions

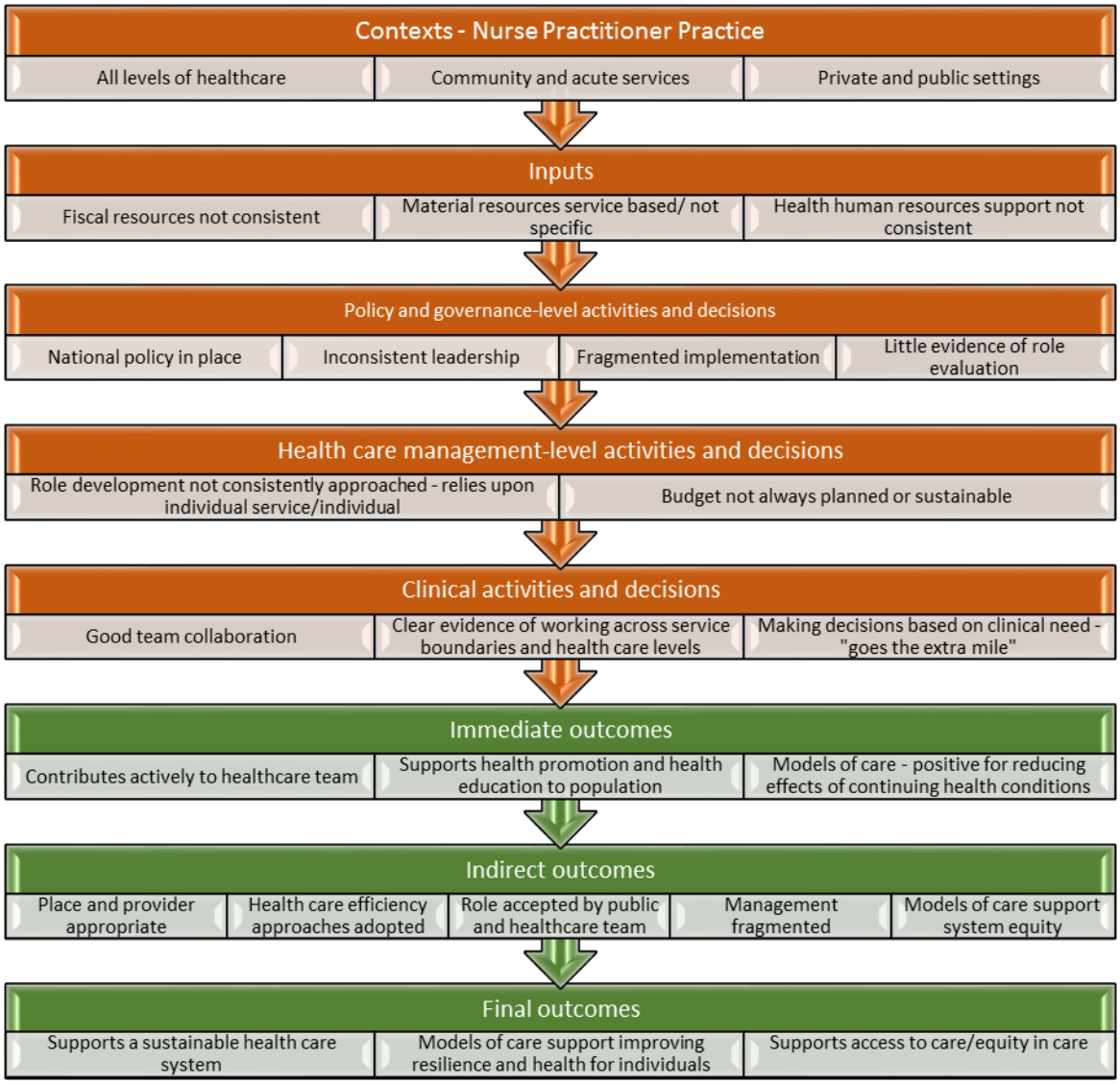

Figure 2: Themes against the RBLM framework

Demographic Data

Questions 1, 2, and 3 asked participants how long they had been registered as a NP in NZ, whether or not they had worked as a NP in other countries, and how long had they been nursing. The majority of participants indicated that they had worked as a nurse for between 21-30 years (n=15) and over 30 years (n=15), with 58 per cent (n=18) indicating that they had been registered as a NP for between 3 and 5 years. Two respondents said they had worked for more than 10 years as a NP. Four respondents had worked as a NP in another country. The countries indicated were United States of America, United Kingdom and Vietnam.

How long have you been nursing?		
Answer Options	**Response Per cent**	**Response Count**
3 - 5 years	0.0%	0
6 - 10 years	0.0%	0
11 - 20 years	11.8%	4
21 - 30 years	44.1%	15
31 years and over	44.1%	15
Please comment		3
answered question		**34**
skipped question		**1**

Figure 3: Experience in nursing

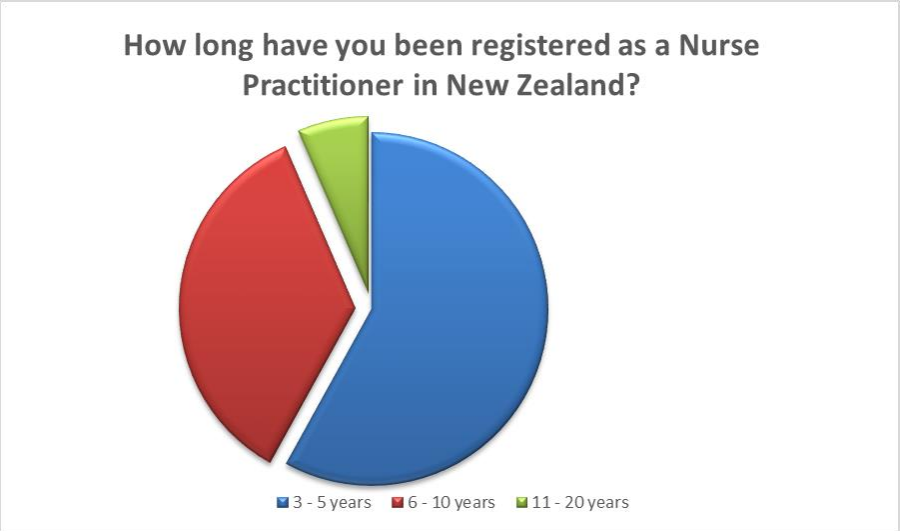

Figure 4: Length of experience as Nurse Practitioner in New Zealand

This data suggests that whilst there is an older nursing profile in terms of years of experience, the population of NPs is young in terms of experience within this role. In New Zealand and Australia this result is consistent with the overall entry requirements for registration as a NP that necessitates evidence of a minimum of five years practice as a registered nurse, followed by a period of study as mater's level, generally undertaken part time over three years (Australian Health Regulation Agency, 2011; Nursing Council of New Zealand, 2009).

Globally there is increasing concern of the ageing nursing workforce (Buchan & Calman, 2004; Canadian Nurses Association, 2008; Health Workforce New Zealand, 2012a; Hegney, 1996). Health Workforce New Zealand (HWNZ) identified that the median age of nurses has been steadily increasing from 42.6 years in 1998 to 46.7 years in 2010 (Health Workforce New Zealand, 2012b). A recent study on Missed Care in New Zealand showed however that the average age of nurses was even higher, with 51,6 per cent of the respondents indicating their age as over 45 years of which 27.3 per cent they were over 55 years of age (Harvey et al., 2014). The HWNZ report indicated that the ageing nursing workforce is of concern and that strategies need to be put in place to ensure the continuance of an effective nursing workforce. Given the timeframe for preparing NPs, this ageing factor presents very real concerns as to the sustainability of the NP role, unless dedicated policies to preparing younger NPs are implemented. Tis was verbalised by one respondent who said;

> The numbers of NPs are still so low that when I retire…it is unlikely there will be anyone to replace me.

There are various options for consideration to reducing the time to registration as a NP. The United Kingdom (UK) does not identify years of practice requirements, rather applicants are required to meet identified competencies based on general advanced practice parameters and master's educational preparation (Royal College of Nursing, 2012). The United States of America (USA) entry to NP education is similar in approach with a requirement of 500 hours supervised practice and completion of an accredited master's programme (American Academy of Nurse Practitioners, 2013). Both countries require a RN registration but do not stipulate RN experience limits. Although confirmation of advanced practice through a portfolio of evidence is an essential element to both Australian and New Zealand applications, the need to address the age related demographic is a matter for consideration.

Practice and Service

Questions 4, 5, 6 and 12 were analysed together as these related to the clinical practice and service location in accordance with the RBLM parameters. According to Watson et al., (2004, p. 3) efficiency in PHC refers to the "extent to which an organization, policy, program or initiative is producing its planned outputs in relation to expenditure on resources" whilst the effectiveness of the service is measured by "the extent to which an organization, policy, program or initiative is meeting its planned results". By including the practice location into the analysis of where the NPs are located for their specific practice area, the data will provide us with an indication of how responsive the services have been in planning and locating the specialty practice appropriate to population need.

When looking for themes using NVivo, there was a 60 percent coverage throughout the survey of words related to primary health. Words searched in NVivo were; *primary*, *chronic*, *community*, *access, equity* and *general practice*. When asked what specialty practice setting they worked in 20 per cent

(n=6) of the respondents said that they worked in the acute setting, 16.7 per cent (n=5) worked in a chronic care setting and 63.3 (n=19) per cent said that they worked in community.

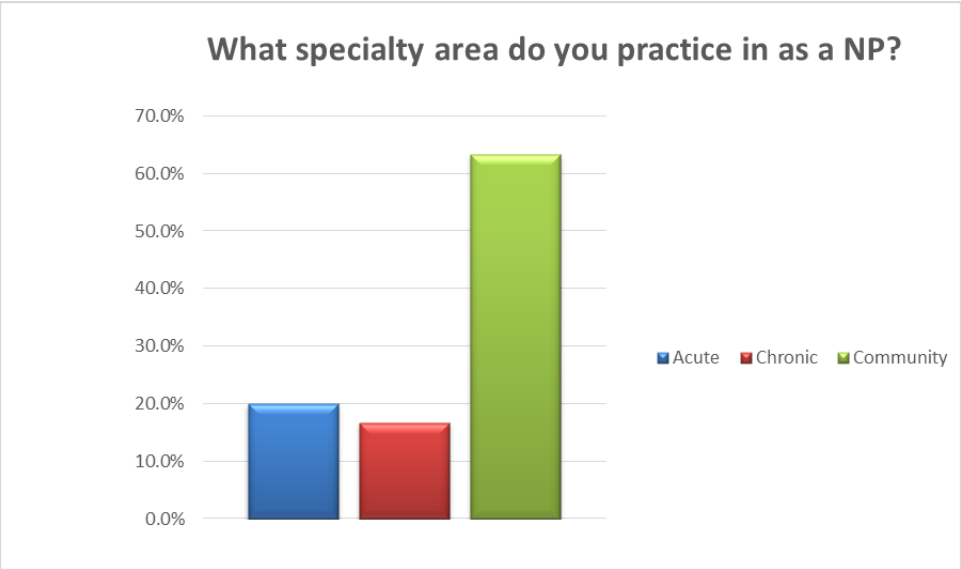

Figure 5: Areas of practice as Nurse Practitioner

Sixteen participants added comments to this question which identified that they in fact worked across all three clinical settings although they had aligned themselves in only one of the question's options. Eleven NPs said that they work in diverse settings which were either acute/chronic related, community/acute related or lifespan related. Three NPs indicated working in a community general practice setting which covers lifespan and condition diversity in practice. Two said that they were based in a condition specific acute hospital setting but that their practice covered both community and acute care services. Two said they worked in a variation of three settings; acute, community and chronic.

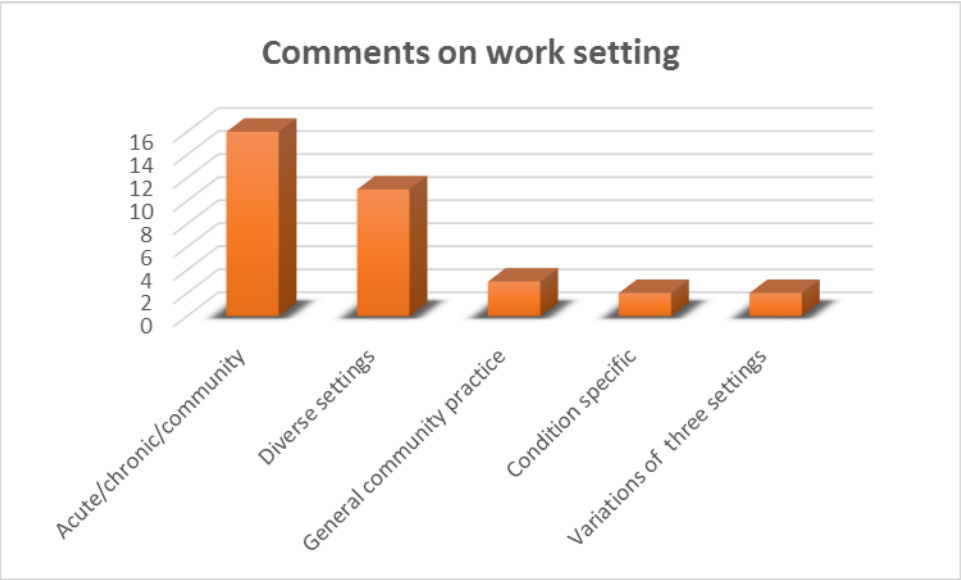

Figure 6: Specialty areas of practice according to participant comments

Supporting the primary health trend question 12 asked participants to best describe their practice setting (as separate from their clinical specialty setting). Thirty four participants answered this question with the median being primary health care (n=16). All areas indicated strong primary health care roles, with those in all sections commenting on their co-ordination and liaison roles across acute and community sectors in some way;

> We belong to PHO[5] so young people can choose to enrol with us to use us as their main practice or they can see us casually.
>
> I work in a general practice setting. I provide a full scope of practice as primary health care. I see anything from new babies through to sexual health, ACC[6], long term condition management, immunisations, well women's health, whatever walks through the door is basically, smoking cessations, immunisations, just what you would generally see at any general practice.
>
> I work with people with chronic conditions and around the clinics within the general practice and I also do home visiting as well as having a little bit of a focus on emotion from time to time. It is a DHB funded primary health organisation in response to a community of high need which supports my work in general practice and so the type of work that I originally started doing was mainly home based with a focus on prevention of hospital admission for people with chronic conditions and that has developed into doing some nurse led clinics within the practices there.
>
> I work with adults born with heart conditions…My work initially started off quite a bit with in-patients and then it progressively changed to older patient clinic work and so a lot of patients throughout the country do have my contact details. I am the first point of contact for the national patient base and I mostly work in clinic either in xxx or xxx [varied locations].
>
> Work for DHB[7] provider-arm but work across the primary-secondary boundary. Do a lot of work with NGOs.
>
> In-hospital care coordination and nurse-led clinics in the community.
>
> I provide specialist gerontology assessments to older adults in the community and Aged Residential Care. I then liaise closely with the primary health care provider (who retains the lead in health care provision) and other support agencies or specialist services - such as psycho geriatric, rehab services and district nursing.

[5] PHO is the term given to primary healthcare organisations in New Zealand. These form part of the PHC reform strategy which are government funded not-for-profit organisations that provide primary health care and primary care to communities.
[6] ACC is the Accident Compensation Corporation.
[7] DHB is short for District Health Board

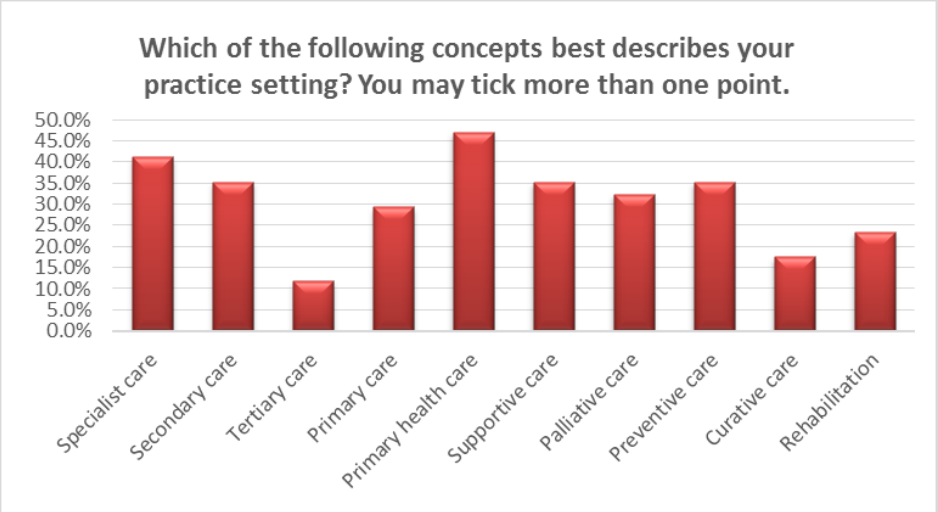

Figure 7: Concepts of practice

The questions 4 and 12, "what is your specialty practice" and "what best describes your practice setting" was structured this way in order to identify if they were practising in the most appropriate setting for their clinical specialty practice. Watson et al., (2004) identifies both the environment within which the work is carried out and the systems that support that work under the label of PHC efficiency inputs and activities. The specialty practice of the worker is then identified under PHC effectiveness by identifying their intermediate (indirect) outcomes in which the appropriateness of the place and provider is compared between the PHC efficiency and the PHC effectiveness. The effectiveness of the service is identified when the place and the provider align so that the right service is provided to the right person by the most appropriate health worker with the appropriate safety measures in place (Watson et al., 2004 p.13).

These questions indicate that NPs are positioned in specific areas of either acute, chronic or community locations, yet they identify themselves as providing PHC across all of these settings. The fact that NPs identify their practice within a PHC model regardless of setting is encouraging because it suggests NPs are able to adapt to their environment whist still focusing on the comprehensive needs to the patient. Benner, (2001) identified that experiential knowledge allows professionals to adapt to changing environments, and this concept is captured in the competency standards for NPs which says that NPs must demonstrate "advanced practice in direct client care within a range of contexts and situations" (Nursing Council of New Zealand, 2008).

Ethnic, Cultural and Geographical Elements of Practice

The next section of the survey examined the social elements of practice by exploring the ethnicity of the population group that NPs work with, their cultural idenitiy, the geographical areas of practice, and the social determinents of health. Whilst New Zealand is becoming multicultural with many cultures repesented in the major cities, there remains a largely bicultural population in rural areas with Māori and Eurpoean New Zealanders being predominantly represented. Diderichsen, Evans, & Whitehead (2001, p.14) suggest that "social stratification, differential exposure, differential susceptability and differential consequences" play an important role in determining the health of a community and how they deal with the social determinents of health that affect them. It is known

that access to health services outside of major centres is generally poorer with an associated increase in those social determinents such as unemployment and distance to specialst services being signficant conributing factors (Gilson et al., 2007; Turner, Rudge, & Keyzer, 2007; Walkerman et al., 2008). It is important to identfy these factors when examining the efficacy or health service delivery. Browne, Smye, Varcoe, Wong, & Rodney, (2011) and Wong et al., (2011) suggest that the PHC performance indicators do not necessarily address the marginalised populations effectively because indicators tend not to be sensitive enough to detect the inequities in populations that may be marginalised through cultural, geographic and social barriers to what is considered mainstream health care. According to the Ministry of Health (NZ) Māori, Pacific Islanders and migrant populations have the poorest health than any other population group in NZ (Ministry of Health, 2013). This section in the survey was divided into considering these three population groups. Social determinants of health that impact on health care delivery was also included as a question together with geographical location both aspects considered to be a factor in reducing access to care (questions 6, 7, 8, 9, 10, 11 and 12).

Question 6 asked participants to indicate geographical area that best describes their location. Thirty-one answered this showing metropolitan being most common area (n=14), this being 50 percent of the responses, however 11 expanded on this question commenting on variations related to 'suburban', 'both rural and urban', 'rural but large area' and 'city and rural'. Four indicated they work across both city and rural regions. One respondent indicated that;

> The medical centre just qualifies as rural being 40 minutes away from a hospital, so I would regard it as semi-rural. We do have issues with access to health services and transport for patients as there is no public transport within the town.

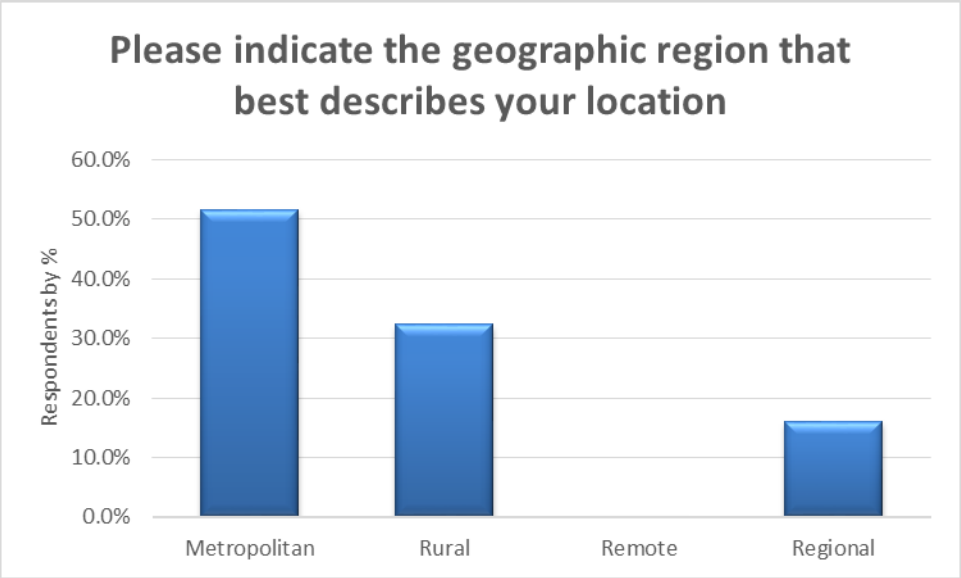

Figure 8: Geographic region of practice

Given the diverse range of clinical setting together with the data that indicates that Māori, Pacific Island and migrant populations have the worst health outcomes in NZ, the findings for the next section were surprising.

Thirty-three answered this section with the majority indicating mixed groups of European (New Zealand and other European nations), Indian, Asian, Māori and Pacifika. Two participants identified

that the majority (between 60 and 75 per cent) of their patients were of Māori descent. Four participants were not sure if they had any migrants in their practice, and one was not sure if there were any Pacific Islanders in their practice. Two commented on seasonal changes in the population dependent upon farming needs and tourist activities, particularly within the migrant population.

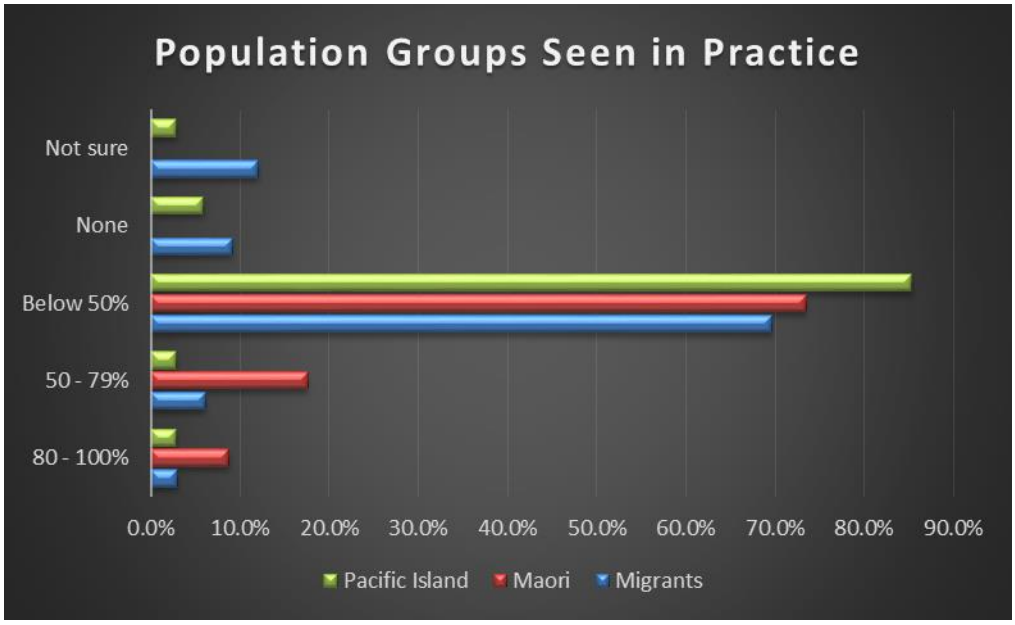

Figure 9: Population groups seen in practice

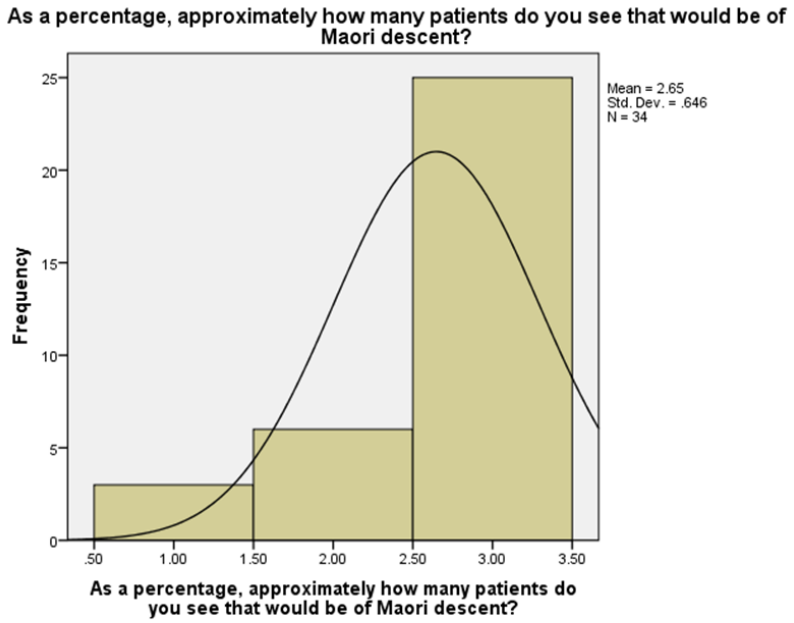

Figure 10: Standard deviation for Māori populations

Of note was that 29 participants (87 per cent) indicated that there were social determinants impacting on health care needs across all population groups represented in their practice, with 3 per cent (n=1) saying there were not and 9.1 per cent (n=3) saying they were not sure. Three participants did not answer the question. Twenty-eight participants made comments around issues related to poverty,

poor housing, reduced access to primary care, illiteracy (also referred to as knowledge or education) counting for the most commonly referred to issues that affect health. This question together with those related to population groups suggests that health care disparities are not confined to any one population group.

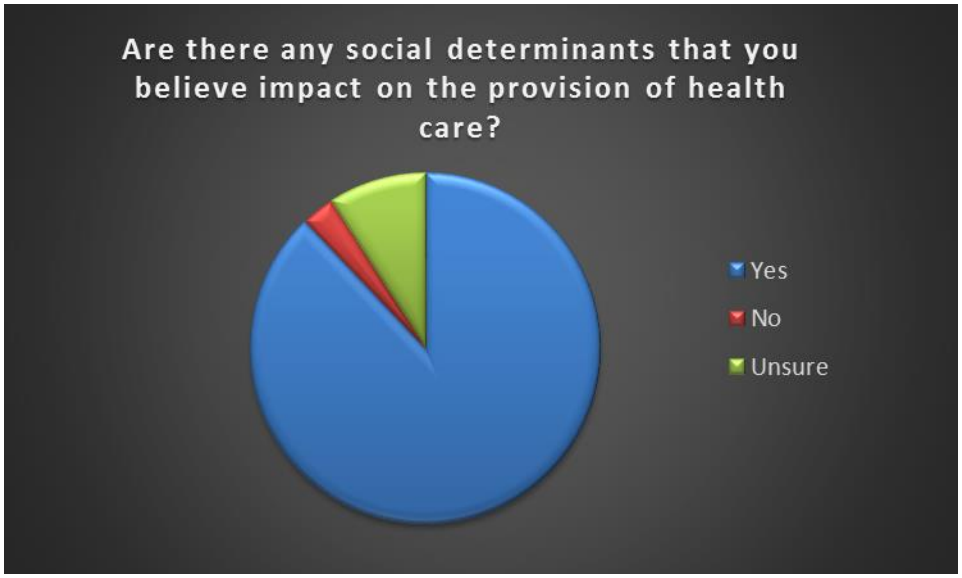

Figure 11: Responses to social determinants of health

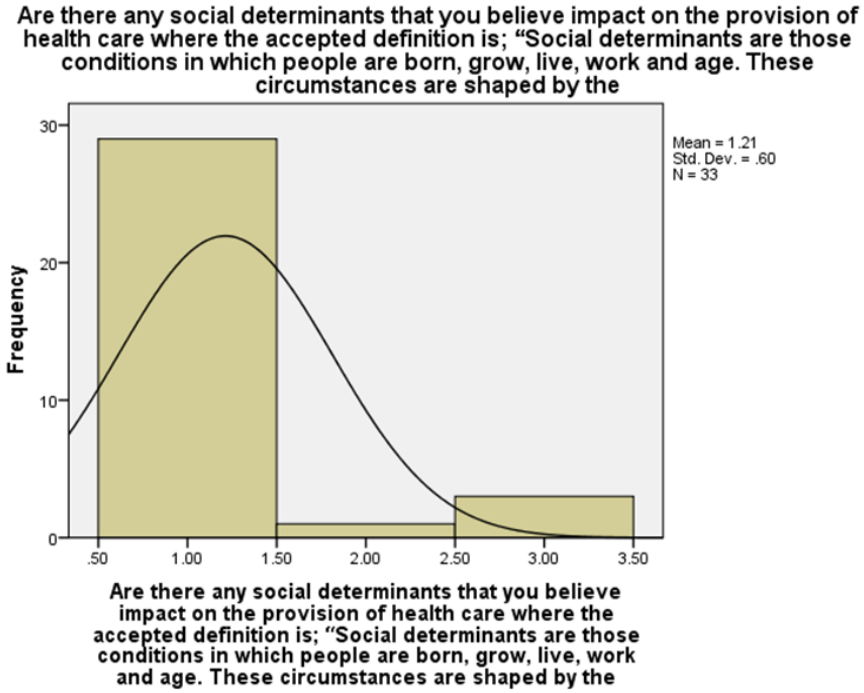

Figure 12: Standard deviation related to social determinants of health

Effectiveness of Service

Watson et al., (2004) state that the outcomes of a health service are influenced by PHC effectiveness as measured by a reduced risk, duration and effects of acute and episodic health conditions, and a reduced risk and effects of continuing health conditions. The aims in this section were to identify a population's risk of experiencing acute, episodic or recurrent conditions thereby focusing on improving health and well-being within a population group. Included within this section is the support for increased health literacy which encourages the self-management of both health and illness.

According to the World Health Organization (WHO) non-communicable diseases create a cycle of poverty. This encompasses chronic disease creating poverty through the loss of social and occupational function, and through poverty creating social and financial deprivation that reduce the ability of people to maintain health (World Health Organization, 2008). Social determinants in health are not confined to any particular socio-economic group. Such aspects as poor housing, unemployment, and reduced access to care are often stated as characteristic of the lower socio-economic groups, whilst obesity, sedentary lifestyles and poor eating habits are characteristic of all economic sections of any population group. Whilst it is clear that marginalised populations are vulnerable, the clarification of what is termed 'vulnerable' needs to be placed into the context of environmental factors, illness factors, geographical factors and lifespan factors. Gaylin & Jennings, (2003) pointed out that the salient feature of any reduced health status is personal autonomy and the ability (or inability) to take control of one's life and health. This is influenced by social and environmental factors that are not always under their control. Examples of this aside from chronic illness, are environmental disasters, geographical factors and national/international financial destabilisation. Cheng, (2012, p.1976) also noted that obesity in teenagers is not necessarily the problem of an easy life stating that "children with obesity severe enough to warrant a report for medical neglect represent the tip of the iceberg and invariably come from impoverished families with chaotic lives fraught with social difficulties, including unfilled basic needs". When exploring the definition of marginalised populations, the comments from the NPs are unsurprising.

In their Primary Health Strategy (King 2001, p.iii), the NZ Government of the time noted that "doctors, nurses, community health workers and others in primary health care will work together to reduce inequalities and to address the causes of poor health status" and that the vision is "for the primary health care sector and local communities to work together to improve the health of all New Zealanders". Compounding this vision has been three significant issues, first the Global Financial Crisis which has significantly affected NZ, the natural disasters within the country that have affected the economy, in addition to the already acknowledged steady increase in chronic conditions which is having its effect on health services globally as well as locally. The latter has been the focus of attention of health services around the world to looking at more integrated models of care (Kickbusch & Gleicher, 2012; King, 2001; Ward, 2010). Kickbusch & Gleicher (2012) notes that health systems governance needs to incorporate the joint actions of health and non-health sectors of a community and in the face of increasing chronicity, this requires rethinking traditional health service delivery models.

Although NZ has a focus on primary health care with population based funding linking communities to community health care services, there remains financial constraints both because of the limitations

on the amount of funding allocated, but also in the way funding is allocated between hospital and community (Finlayson et al., 2012). A study by Jatrana & Crampton, (2009) found that from 18320 respondents, 22.8 per cent postponed seeing the doctor because they could not afford it. Of interest those included in this group were females, youth, people with more than one chronic condition and those under high stress or anxiety. Whilst our study is small, representing only a snapshot of the overall health of a population, the reference to social determinants affecting health indicated by the respondents is consistent with international and national literature.

Despite the significance of the responses to the social determinants, NPs seem to be addressing these health disparities in their own way. The comments and interviews allowed participants to expand on what they do which has shown to be in addition to that which is directed from their position description. Examples of this are;

> I frequently go out to people who are unwell, because I do some proactive visiting so I just routinely make a visit to chronic conditions. Frequently I find that they are actually developing an infection or something like that so you can immediately get on to that, sort out antibiotics and let them, and monitor their response to those and therefore often preventing hospital admission. I do an evening clinic which is designed for people out at work, we haven't had after hours clinics in this area before and I have probably been doing that for I think about eighteen months and I have built up quite a client base of Maori men who don't generally come to the doctor unless they have injured themselves at work for ACC. But being able to do their risk assessments and make some changes in their risk profiles, which supports access to care, because it is free to see me and I've made a little bit of afterhours clinic so I have a flexible service as well, which is either home based if they don't like to come in or, and it is free unless I do a prescription then they pay their normal prescription charge.

> So our service gets asked to get involved in patients while they are in hospital by their admitting team. Developing respect and confidence in our service for referring clinicians is really important so we spend a lot of time relationship building, demonstrating that we make a difference to patients and families because that is what, we need that relationship with the admitting team to get involved in patient care. So we spend a lot of time with that and it is not just patient care that we are involved with, we spend a lot of time providing education and role modelling good palliative care in a hospital environment. We dip in and out of patient care quite a lot so we might just get involved for a short period of time while the patient is in hospital or we might be involved throughout the whole admission, just depends on what the needs of the patient are. So we are very much responsive to need rather than diagnosis. So the GP, the district nurses, any care, and any community based care providers, so a lot of our work is making sure that there is a package of care that is appropriate for the needs of the patient when they are discharged.

Suporting the NPs approach to their work and health care delivery, are the four key dimensions of equity-oriented PHC services developed by Browne et al., (2012, p.5) which are important when working with marginalised populations. Given the evidence that suggests that the NZ population is generally health disadvantaged, these elements seem appropriate to explore in the analysis of the study.

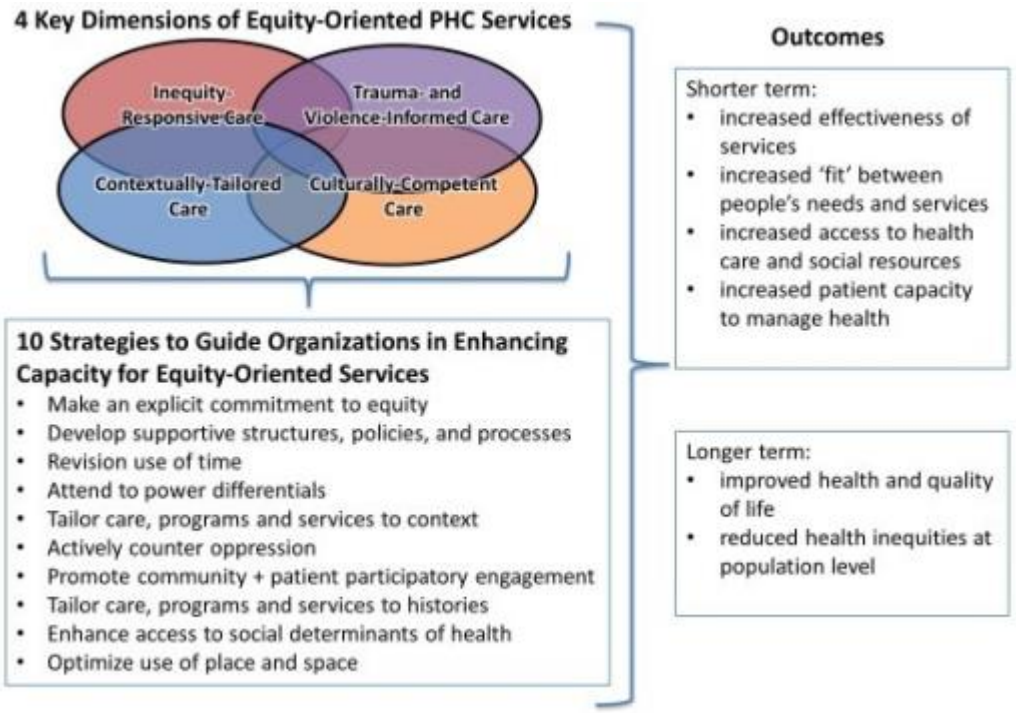

Figure 13 : Browne et al (2012, p.2), Enhancing equity-oriented PHC delivery

Interviews from the participants indicated that they are addressing some of these inequities in their own daily practice. Specifically the following quotes suggest that NPs are addressing the *inequity-responsive* care dimension which explicitly examines social determinants of health as being part of health care practice, and the *contextually-tailored* dimension of care which includes services that are structured to address the individual needs of the patient. The third response identifies elements of the *culturally-considered* care by making provision for the access to care as the patient requires it;

> It has its challenges because a lot of the people who work in NGO's are untrained you know they don't have any tertiary education and it is all about trying to kind of increase their capability and capacity to support the person so it is about trying to increase their understanding and awareness and that, so I kind of run some formal sort of education sessions a couple of times a year but also go into the different NGO's and do little bits of training and education.

> We do a lot of work around making sure that conversations occur with patients and families that address not only the needs now but potentially the future care needs, which I think is generally not done well in a hospital. We tend to look at what the needs are currently and when the patient is there and not a lot of conversation often happens about how you deal with things as the patient's condition change. So we do a lot of advanced care planning type conversations with patients. That means that we need to share those conversations with the community providers so being a regional, a tertiary provider, we work very closely with all the GP's throughout the region and also the hospice providers and the district nurses and the other care managing services.

> I had a guy who came in for a follow up after being really unwell with a viral illness and he was involved with an incident here and he had been sitting on it for two or three years and not being able to discuss or talk to anyone about it, but today he finally opened up and I could have just said oh you have to come back another day and do that and it put me half an hour behind with everybody else but I listened to him and gave him access to primary mental health counselling and you know, if I had said well I have not got time today you will have to come back later he would have probably not told anybody for another two years.

When considering the four key dimensions outlined by Browne et al., (2012, p. x), the NPs in the survey are demonstrating an ability to manage care around the usual daily practice in a way that allows them to "fit between people's needs and the services" by engaging patients, developing trust and providing responsive care that is patient centred. In doing this, they are also addressing the third primary health care outcome of the PHC RBLM which addresses the reduction of risk and effects of continuing health conditions.

Service Responsiveness

Watson et al., (2004) discuss the need for health organisations to provide the support to health professionals so that their work is supported by policy, financial, human and material resources. In PHC services, these resources need to be considered across all public, private and community sectors. In many countries, a change to a PHC health care system requires the shifting or resources from acute care to community care inclusive of the character and mix of clinical, financial and workforce allocations. (King, 2001; World Health Organization, 2008). Of importance is the inclusion of stakeholders in the decision making process across the spectrum of health.

Questions 13, 14, 15, 16, 17, 18, 19 and 20 address the clinical, financial and material resources that NPs have access to in order to undertake their work effectively and efficiently.

Question 13 asked NPs if they had their own office and budget. Only one comment identified an operational budget, two indicated that the budget was dependent on the hourly income and one had a capped budget. Seven worked within a service budget and one was unsure of the budget. For the purposes of identifying budget allocation, the comments section was developed into a graph using themes from the comments. No explanation was given from those who had no budget, although many wrote that they had 'no delegated budget' rather than no budget, and in these instances it could be assumed that they fit under a service funding allocation.

Answer Options	Response Percent	Response Count
Yes	57.6%	19
No	33.3%	11
Unsure	9.1%	3
Please can you expand on your response		23
answered question		**33**
skipped question		**2**

Figure 14: Do you have a designated office and delegated budget?

This question should have been separated to identify more clearly the budget allocation, however, when working through the comments the following information was collated.

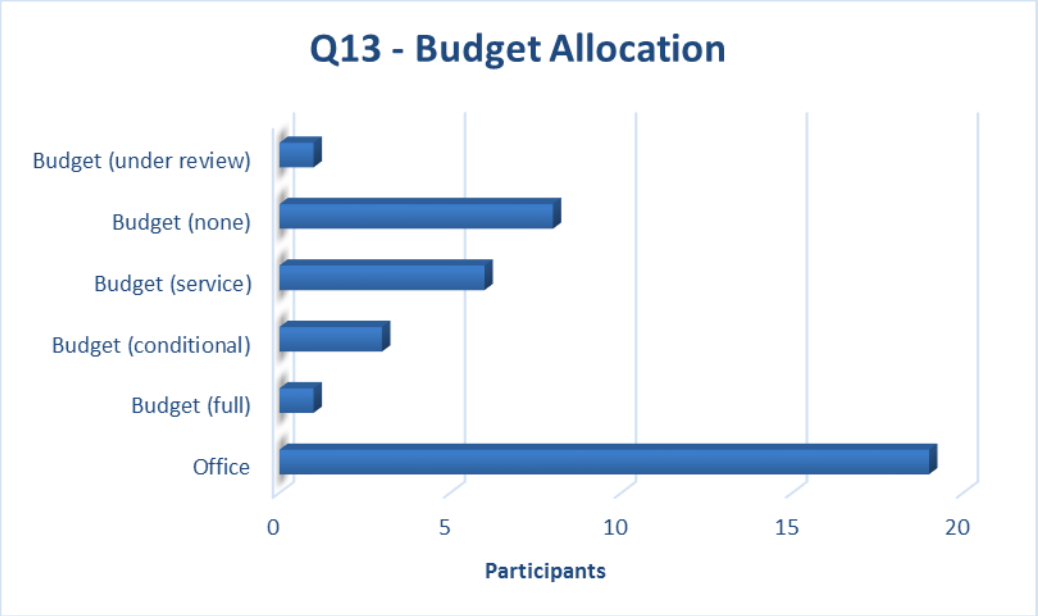

Figure 15: Budget allocation as identified by participant comments

There are some differences in responses between Questions 13 and 17, where participants were asked to explain how their position was maintained. Seventy-three percent indicated sustainable funding through district health boards, ACC and PHO funding whilst 17.6 per cent indicated project funding with a limited time period attached, although not as a short term contract of which 5.9 percent said they were working under. These figures might be skewed with participants being allowed to tick more than one response to the question.

Figure 16: Maintenance of Nurse Practitioner position

Despite the variation in statistical information, comments in this section support a lack of consistency to the funding NP positions;

> The practice obtained DHB funding for the position initially and that funding has continued over the past 6 years.

I am expected to self-fund my position. My funding is from ACC, patients who see me as their health professional and the Aged Residential Care providers who hire my time on an hourly basis.

There is no recognised funding for my role - the organisation (not-for-profit) has chosen to re-distribute funds to pay for the role.

Employed on medical roster FTE.

This was my previous position. Nothing promised post funding.

Privately funded position by the practice I work in.

There are many external influences that affect the ability of the service provider to achieve sustainable funding, largely based on financial reasons rather than clinical appropriateness. Cooke, (2006) identified this in a study undertaken in United Kingdom that recognised nursing roles being changed according to financial need, and with that, the location of such a role. This led to undue pressure on staff who found their ability to provide care was compromised. Whilst funding their role was of obvious concern, none of the participants in the study indicated that they were incorrectly situated or that their location affected the way they provide care to their clients and patients.

Questions 18 and 19 asked respondents to indicate how their annual and sick leave was managed, and who replaced them in these instances. Most said they did have sick leave and annual leave allocations (n=30) with 9.1 percent indicating that they did not have such provisions. When examining the comments section, there are variants worth noting. Ten responses indicated that NPs were not replaced when away, three indicated that they were replaced by a medical officer, two said they were replaced by a RN and three said it was a mixture of RN and medical replacement.

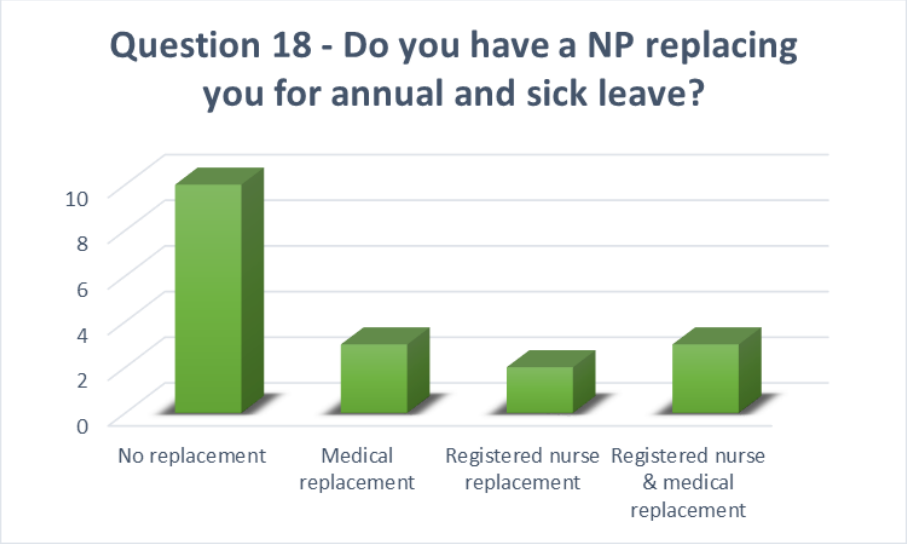

Figure 17: Replacement for leave allocations

Despite the NZ Government saying that NPs are "key component[s] of the health and disability workforce of the future, one who has the potential to improve health status and to reduce the national burden of chronic disease" (Ministry of Health New Zealand, 2009), the lack of consistency in managing and planning the sustainability of the role was articulated by respondents. To put this into context, the allocations of health funding are given to District Health Boards (DHB) and other quasi

health organisations. These services then manage the funds according to population need, and this includes the type of roles required for health care delivery. It is known that NP roles are commonly created by and for, an existing RN in an organisation with a transfer of funds from the RN allocation to support a NP position once it has been established. This leaves a gap in the RN roster so that the NP is at times, required to fill both the RN and the NP job description. This was clearly demonstrated in Australia in a study that examined the role development of NPs (Harvey, 2010, 2011; Harvey, Driscoll, & Keyzer, 2011). Respondents in our study have identified this as well;

> Employed as one since [date] so just coming up two years but I was working for a whole year prior to that, I was employed as a registered nurse whilst we were developing the nurse practitioner role but I did actually do the work. It was just because there was no funding and you know I was being paid as a registered nurse.

> I think it was more driven by me. I was fairly determined that that is where I was heading, there were tangible nods from different people but not particularly tangible help from anyone. I don't think that was necessarily an obstruction I think it was just sort of back then just basic ignorance about what it all involved and what is required and what have you so, yes, there was no one physically obstructing me but no one actively helping.

Participants who had good support, also highlighted barriers to general role development;

> I mean our team, I guess the service made a commitment to having an NP role at the time that I was preparing to go to council. And so the role had been approved, not only had it been approved but also it was a new role so it was not a CNS role that just became a nurse practitioner role, it was actually a completely new role for the CNS role that I vacated and that was filled as well.

> There is always issues and problems yes. I think one of the things would be that the, some of the services are not aware of the role and, or I don't know, maybe don't understand still how I work and even if I refer a patient to hospital and they get referred on from there won't get the information back or, and sometimes I don't get x-ray results back, only they might go to the GP rather than me because they don't recognise the nurse practitioner status.

Based on comments, a trend of filling gaps around budget, replacement and role variations, suggestive of unsystematic planning. Finlayson et al., (2012, p.124) also found that "the funding arrangements and regulation restrictions prevent employment opportunities within PHC for NPs and the role reaching its full potential" which supports this contention.

Concerns as to the role of NPs not being supported was highlighted in a newspaper article noting that "although 1000 nurses have completed the qualification in the past 12 years, only about 100 are working in the role" (L. Harvey, 2013), with a NP being noted as saying that "the role was starting to take off, but job opportunities were still pretty slow". The chairman of HWNZ has attributed this to nursing leadership, and in an interview for Dominion Post stated that "the nursing leadership is organisationally divided and some attempts at extending roles have not been politically savvy or necessarily sensible" and although "extended roles for nurses are essential", they are being "rationalised" because "it is pejorative to view nurses as being suitable to take on any unwanted or unfilled role in health, as it implies that nursing per se is not essential" (Gorman, 2010).

In spite of Gorman's comments other roles such as the Physician Assistant are being trialled in New Zealand. These roles were first implemented in the United States in the 1960s, around the same time as NPs were first implemented in that country. The description of PAs given by HWNZ (2012) is "a distinct, complementary role within the health team working alongside doctors, nurses and other

professionals" and attracts "second career people with several years of healthcare service background who go on to obtain a two-year post graduate qualification specifically tailored to the role" (Health Workforce New Zealand, 2012a). Although the NZ information suggests that it is a complementary role to both nurses and doctors, in the United States of America the position is repeatedly advertised as a NP or PA (Fairman, 2008; Harvey, 2010; Jolly, 2008).

Further evidence of role substitution in NZ is demonstrated in a recent move to introduce other role extensions such as the clinical pharmacist prescribers and making provision for nurse prescribing which will allow nurses (who are not registered NPs) to prescribe medication in a limited field of practice (Health Workforce New Zealand, 2012). The Nursing Council of New Zealand (NCNZ) is also preparing to regulate nurse prescribers who are not NPs. Consultation has been completed with "The majority of submitters (90.2%) supporting[ed] the community nurse prescribing proposal and agreed that community nurse prescribing will enable patients to receive more accessible, timely and convenient care (91%)" (Nursing Council of New Zealand, 2013). This addition to advancing nursing has the potential to negatively influence the sustainability of NPs, given the somewhat unsystematic approach to NP implementation.

Professional development

Questions 20, 21 and 22 examined the support for ongoing learning for NPs. Watson et al., (2004) identify that for a service to support proactive care in practice, and professional development is an essential component of an organisation's plan. Additionally, the NCNZ make it a mandatory requirement of registration for NPs. NPs are audited regularly by the NCNZ and are required to maintain a portfolio of evidence on professional development and practice. The NCNZ states that "the level of your professional development should be appropriate to your scope of practice and work context. Your 60 hours of professional development in 3 years should include more professional learning than just the mandatory or core training required by your employer. Some of your professional development must be relevant to your development as a nurse and to your area of practice" (Nursing Council of New Zealand, n.d.).

Question 20 asked respondents if they had continuing education support whilst question 21 asked them if they had any mentorship available to them. Question 23 asked how these aspects of clinical and professional development and support influenced their practice.

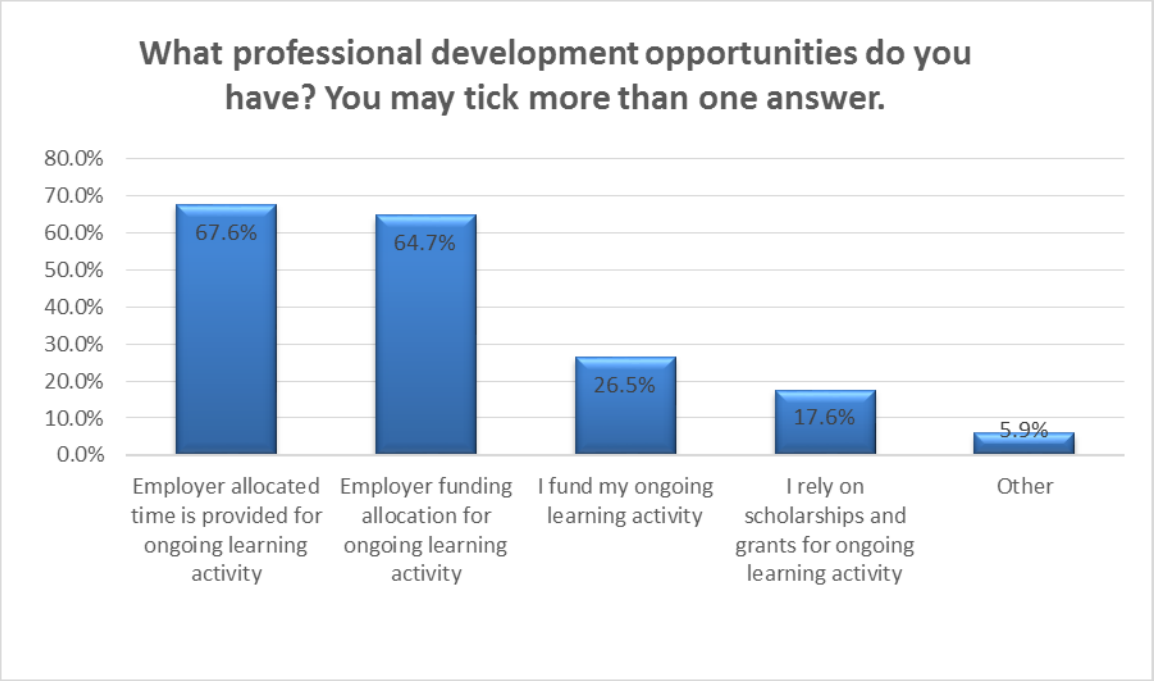

Figure 18: What professional development opportunities do you have?

Figure 19: Do you have any professional nursing mentorship available to you?

In both the support for continuing education (Qu 20; N=23) and in seeking the support of mentors (Qu 21; n=21), respondents indicated that they had good support. Whilst the survey indicates positive results for ongoing learning and development by employers of NPs, comments by the respondents in the free text section as well as in the interviews, indicate problematic implementation of that support;

> Difficult to get funding. Desperately need CNE funding as a requirement for prescribing NP to meet competencies.
>
> …ongoing learning is a challenge as funding doesn't match requirement.
>
> The CME funding NP are allocated is not enough to fund one international conference a year. I rely on every source of funding I can get my hands on - if I can get it, then I have issues with having the time off work to

> enable me to attend. This has meant that on 3 occasions in the last 7 months I have taken AL [annual leave] to attend professional development opportunities I think are important to my practice and development as a NP.
>
> Currently there is a "ban" on attending conferences or symposiums. I am able to attend our in house sessions - journal club, peer review and x-ray meeting.
>
> 1 non clinical day per week. Annual education fund of $4000 which can be accrued over 3 years before losing it.
>
> There is no designated funding from my employer for professional development; however there is a recognition of the importance of this, and funding is agreed sporadically, in response to particular need/request. Historically I have been funded (or partially funded) for one activity (e.g. conference) per year.

The concerns raised here in relation to the continuing professional development requirement suggest that unlike their medical counterparts, NPs are not afforded the same privilege of supported continuing education. Many of the comments alert us to a view that NPs are not completely regarded as a definitive position; rather they are substitutes for either for RNs, medical officers or a combination of both, as identified in question 19 when asked who replaces them for sick leave and annual leave. With this perspective on the role, it is not surprising that there is no real consistency demonstrated in the provision of continuing education opportunities, nor is there any relative equity between NPs and medical officers in terms of financial and time support for these activities. Tatham, (2012) identified that some medical practitioners working in DHBs;

> "… receive a number of non-salary benefits such as a superannuation subsidy matching dollar for dollar up to 6 per cent of total gross earnings from the DHB, reimbursement of continuing medical education (CME) expenses up to $16,000 per year, additional reimbursement of CME travel expenses, 10 days paid leave for CME activities, annual practising certificate worth about $1000, medical indemnity insurance, RNZCGP membership, membership of other professional associations relevant to their job, six weeks annual leave per annum, and on-call, after-hours roster variable allowance."

Yet NPs are not afforded any sort of demonstrable equity in regard to their continuing education requirements; a matter that is pivotal for the continuance of their NCNZ registration. When asked how this affected their practice, the response was varied;

> This was put in place after a difficult time with multiple barriers to the NP role.
>
> …makes it harder to extend knowledge base and keep up with trends. End up doing more in your own time or within your own resources which is a bit of a downward spiral.
>
> I do feel that I should have some more formal time with a clinical supervisor but have not found anyone that I would like to ask. I am well supported within the general practice team.
>
> …lack of support/ supervision put practice and self at risk by my "overworking" to try to cope with work load.
>
> From a clinical practice perspective we sit somewhere between nursing and medicine - often unclear where we ally with and as such sometimes overlooked for relevant nursing or medical stuff (sorry) i.e. may not be invited to a meeting we feel we would positively contribute to etc. Not a huge issue on the whole but I think it reflects the uniqueness of the role.
>
> I think the main impact is that I tend to work things out for myself, which is not necessarily a bad thing but often slower and less efficient than having regular mentorship. Clinically I have great medical support from the GPs, and I have access to specialist medical support if I need it. This works ok. It is the wider aspect of

> care and service delivery that is most affected I think - ideas for quality improvement, how to work most effectively with the GPs, managers and so on (this has been trial and error). So - in some ways the lack of specific mentorship has made me more independent and self-reliant...stronger and resilient...on the other hand I think development of the role has been less efficient than it could have been.

These responses demonstrate that not only is the road to developing a position of NP individually driven, but maintaining it in relation to the registration requirements is also difficult. As Gorman (2010, p.2) noted, "although status is linked to remuneration, as is true for the medical profession, more important factors in affirming nursing by way of recruitment and retention include positive role models, clinical leadership, coherent and accessible continuing career progression and training, and practice diversity". Although it can be acknowledged that medical practitioners have a much broader scope of practice, with concomitant requirements for learning, the disparity of employment benefits between medical and nursing (specifically NP) professions is noticeable. Despite this, the NP role within organisations appears to be interchangeable with that of medical officers (as evidenced by leave replacement comments), a situation that undermines the role of NP and further ratifies the 'gap filling' approach to NP employment that is evidenced globally (Raftery, 2013). This disparity articulates hesitance in working towards the NP role, as this statement concludes;

> I have on more than one occasion felt unsupported both in terms of my clinical needs and my professional support. I find that I walk a very blurred line between professions and I don't fit in either really. I am often expected to practice at a level comparative to my medical colleagues yet my professional development and support is nowhere near comparative. In terms of my mentorship I think this is invaluable as a NP yet no time nor resource is allocated to this. There are issues which a NP faces both clinically and professionally that require good support and guidance that aren't currently available. This has led me to look at other career directions.

Autonomy and Practice

The RBLM makes provision for the increase of knowledge about health and healthcare in the population as an immediate or direct outcome. In addition to this the indirect outcomes include healthcare system efficiency and a sustainable healthcare system. When positioned in the context of NP contribution to PHC regardless of area of practice, we focused on how having a NP role, with autonomy in practice, can streamline clinical efficiencies within the health system. Because the NP has a level of authority in practice that allows for case management and co-ordination with individual ability to manage total care within a health care team, we focused on the NP's role in the multidisciplinary team, (Qu 23), the autonomy they have in their practice (Qu 24), and what the NPs understand as autonomy in practice. In (Qu 25) respondents were also asked where their practice best fit in the health care system.

Ninety-one percent of the respondents (n=30) said that they work in a multidisciplinary team (MDT), many providing information in the free text that demonstrates an extensive team within which they work, crossing, in many instances, across acute/community boundaries, a good example of which were the following responses;

> It is excellent & works very well involves DN, Palliative team, CNSs, OT, Physio, Podiatry, Rural Nurse specialists, orthotics, Complex Clinical Care Network, PMH & 2ndry CMH, direct access to consultants & RACFs staff,
>
> ALL one team Video conference as option for care/advice

GP, NP, psych, RN, HCA, OT, PT, nutritionist, SLT

The response to working within a MDT is a positive one, given the focus of integrated care, managing chronic care in the community and person-centred care, all concepts highly encouraged within the New Zealand Primary Health Strategy (King, 2001), and supported within the RBLM. NPs are in a unique position to assist in the continuity of care or the provision of seamless care across health organisational boundaries in that they have the authority to manage care independently without having to refer patients to medical practitioners for aspects of care that are quick and easy to deal with. This enables a decrease of those unnecessary delays between RN and medical officer, in time to clinical care. This legislated delegated authority for NPs provides an opportunity for services to enhance existing efficiencies in both cost and clinical outcomes. For the purposes of NP practice, this enhanced authority is referred to as autonomous practice, which is a nebulous term when one considers that no health care professional can say they work autonomously. To clarify the terminology, one has to refer to the NCNZ. According to the competency standards for NPs, autonomy comprises those activities which are normally a delegated authority for a RN but become an independent authority in NP practice, specifically prescribing medications, receiving and sending referrals to other practitioners, admitting patients to hospital and managing care independently (Nursing Council of New Zealand, 2009). When asked what best describes their autonomy, respondents provided a variety of comments which have been summarised as follows;

Answer Options	*Response Percent*	*Response Count*
I manage my own case load	94.1%	32
I co-ordinate care and I am able to make changes to the clinical plan as required	82.4%	28
I have to contact another member of the multidisciplinary team before I make changes to clinical plans	5.9%	2
I am able to refer patients to other health professionals	94.1%	32
I receive referrals from other health professionals	88.2%	30
I co-ordinate care for a medical practitioner/medical team who makes the final decisions on clinical management	17.6%	6
I make clinical decisions and I prescribe	82.4%	28
I make clinical decisions but I do not prescribe	14.7%	5
I make clinical decisions but I do not order diagnostic tests	2.9%	1
I have no real clinical decision making autonomy	5.9%	2
Please provide further comments or examples from your practice		22
answered question		**34**
skipped question		**1**

Figure 20: Which of these best describes the autonomy you have in clinical decision making?

When analysing the free text responses and text from discussions in interviews, the barriers to NPs undertaking certain activities that support streamlined practice were highlighted;

> I am able to order tests. Unfortunately I am as yet unable to order radiology due to the radiologists requiring "permission and agreement" from the GPs in the GP team for me to do so. We have sent the required correspondence and are awaiting the response. The local DHB does not have me in their database as a provider for referral letter responses as the letters always end up with the patient's GP who then forward them to me.

> Own case load and patients choose to see me. I liaise with the GP if it is out of my area of expertise and leave the next part to him or carry on/ follow up with his advice. Radiology funding is still causing issues for payment to the radiologist from HBL, so these requests have to have the GP's signature.

Most comments however, were positive for example;

> I am able to admit patients on the spot, I am able to see patients from clinic which has been, for very official sort of urgent, if they need urgent attention and also you know of they are new referrals I am able to see them quickly.

> I make clinical decisions & I do order diagnostic testing I can also admit patients to secondary care with direct input from consultants

> I work independently, order my own diagnostic tests and prescribe according to my own clinical decisions. I will from time to time ask for a second opinion if I am unsure about a diagnosis or how to manage a particular problem.

Part of this section asked the respondents to identify if they have been given authority to make changes in how health care is provided.

Figure 21: Have you been given the authority to make changes in how health care is provided?

Two NPs were unsure of this question, correlating with two NPs identifying that they had no autonomy in their practice. Other responses however, were positive for example;

> Developed new role and service

> Extensions to nursing skill sets in wound care enabling assessment, diagnosis and management of patients with chronic wounds in their home setting. Developed protocols, procedures and pathways which has changed provision of health care.

Some comments were mixed in their ability to make change, and this finding is in keeping with other studies that have found innovation stifled in practice (Cooke, 2006; Hayes et al., 2012);

> In some ways yes. However, I am constrained by the way facility managers wish to work. Although if I get buy-in, I have the authority to change things, the managers have to agree - this is the stumbling block. I put this down to fear, mainly. Fear of doing things differently, and - most importantly - fear of not being seen to be doing everything (to keep people alive, prevent weight loss, to meet audit requirements, paperwork requirements and so on) – a focus on meeting targets tends to detract from a willingness to veer away from the norm. People in leadership (managerial positions) are often uneasy about my willingness to be innovative, do things differently - so I am careful about how and when I do, in order to preserve relationships.

When asked how they considered their practice against certain pre-determined parameters and against a Likert Scale of 'significantly', 'most of the time', 'average no real difference', 'seldom', 'never' and 'not applicable', NP responses were varied with a rating average of between 1.82 for a wellness model of care and 3.00 for acute care focused. Crossing over acute and community boundaries had an average rating of 2.15.

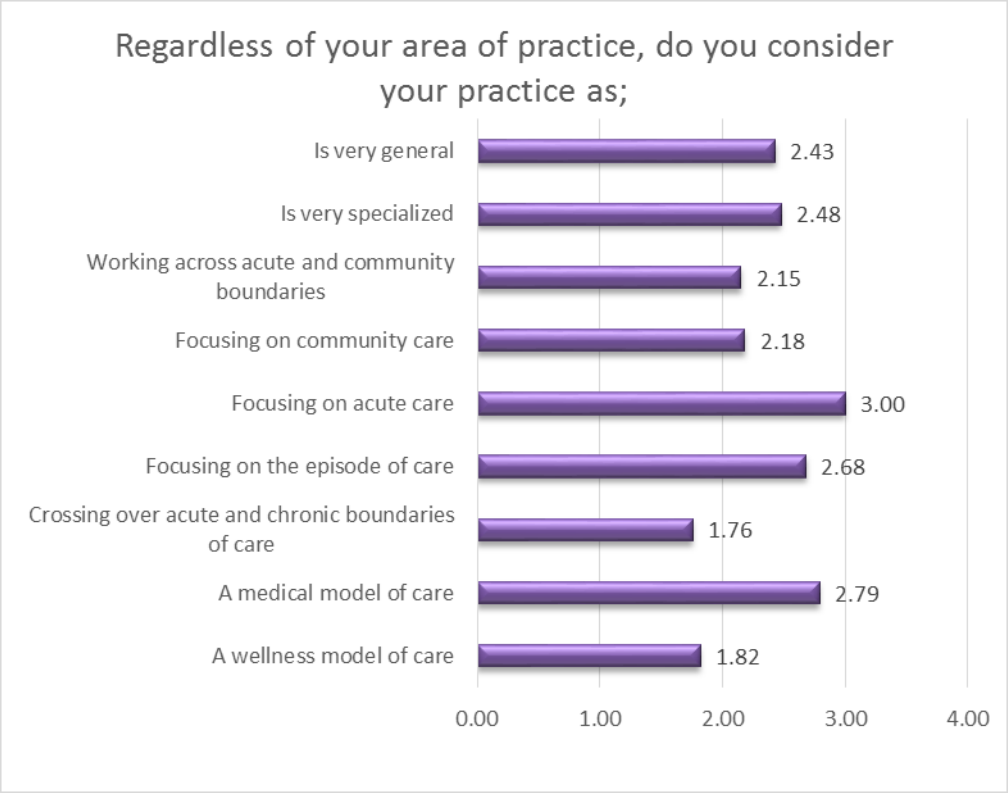

Figure 22: Average ratings for consideration of practice (Qu 25)

Despite this data, the responses in the free text section of the survey and from interviews provided comments suggestive of a higher rate of boundary crossing and involvement in PHC activities, for example;

> Acute episodes of chronic illness is common.

Generally I see chronic disease patients…I also see minor acutes.

I try not to focus on the episode of care - rather I take the long term view approach and encourage patients to maintain a regular review with me for chronic conditions management. I don't often see patients who present acutely as we have a very good system for them to see the GPs and I have focused on chronic care.

My nursing practice is wellness but obviously I see Illness in my day to day practice and use tools of biomed to provide care as needs be.

My model of care is very "fluid" and depends upon the needs and wishes of a particular patient and their whanau/family, therefore can be a mix of all of the above.

I work in chronic care, but patients never have one diagnosis and rightly so, try and get as much out of you as they can. They present with acute conditions to a chronic condition clinic.

Sustainable Care

The RBLM makes provision for the final outcomes of PHC effectiveness. Included in this section are the opportunity to provide sustainable healthcare systems, improve and maintain functioning, resilience and health for individuals, and improve the level and distribution of population health and wellness. In applying this to NP practice, respondents were asked to rate their against the following parameters;

You assist your clients/patients in improving or maintaining their health
You increase knowledge about health and health care within the population that you work
You reduce the risk, duration and effects of acute and episodic health conditions
You reduce the risk, duration and effects of continuing health conditions
You have improved the access to care
You have improved the equity of care to your community

Respondents rated themselves against a scale of 'significantly', 'a lot of the time', 'some of the time', 'not much', 'never' and 'not applicable'. Ratings between the parameters offered were closely aligned with rating averages between 2.00 and 1.50 indicating a strong focus on PHC activities within NP practice.

Figure 23 : Qu 32, Clinical practice PHC efficiencies

Respondents were asked to provide examples within their practice. Nine responded to this section with most interviewees describing their efficiencies in practice, examples of which are;

> My NP outreach clinic serves a community that else would have no immediate PHC access, I also work in x 3 clinics in a week, offering access to NP care previously not offered in our communities, increasing access to acute PHC.
>
> I do provide a service that is affordable - I do many "no charge" consults as I can utilise funding streams to support this. This question is difficult to answer as the effort to assist patients to improve or maintain their health is a team effort and I am only one team member. I do spend more time with patients which they have fed back as being useful. Unfortunately we have not had the capacity to evaluate my role formally which I think would be very valuable.
>
> I work with a poorer population with many needs.
>
> So I guess the difference now is that I can actually go and assess a patient, make my own decisions and do the prescribing and based on all that, the assessments and the decision making, talk to the families and the staff at the time whereas before I used to sort of think well this is what needs to happen but I have got to make sure that the GP or the [service] doctor agrees with me so I need to go and check that out first, chase up somebody to do the prescribing and then go back to the family or the staff and say right this is what we have decided, this is what we are going to do, so the whole process becomes quite drawn out and confusing sometimes. So now it is all one package, I can go in and do the whole thing which is so much more efficient.

In this section NPs were also asked to rate the appropriateness of the position of their practice (Qu32). They were given the choice of;

- Your practice is situated in the most appropriate health service for the client/patient population you see.
- Your practice is situated in the most appropriate location for the type of work that you are undertaking.
- Your practice contributes to the overall service provision.

Rating averages were equally positive from the 33 respondents who answered this question and 96.9% (n=31) indicating that they believed that they contributed to care efficiencies in their practice.

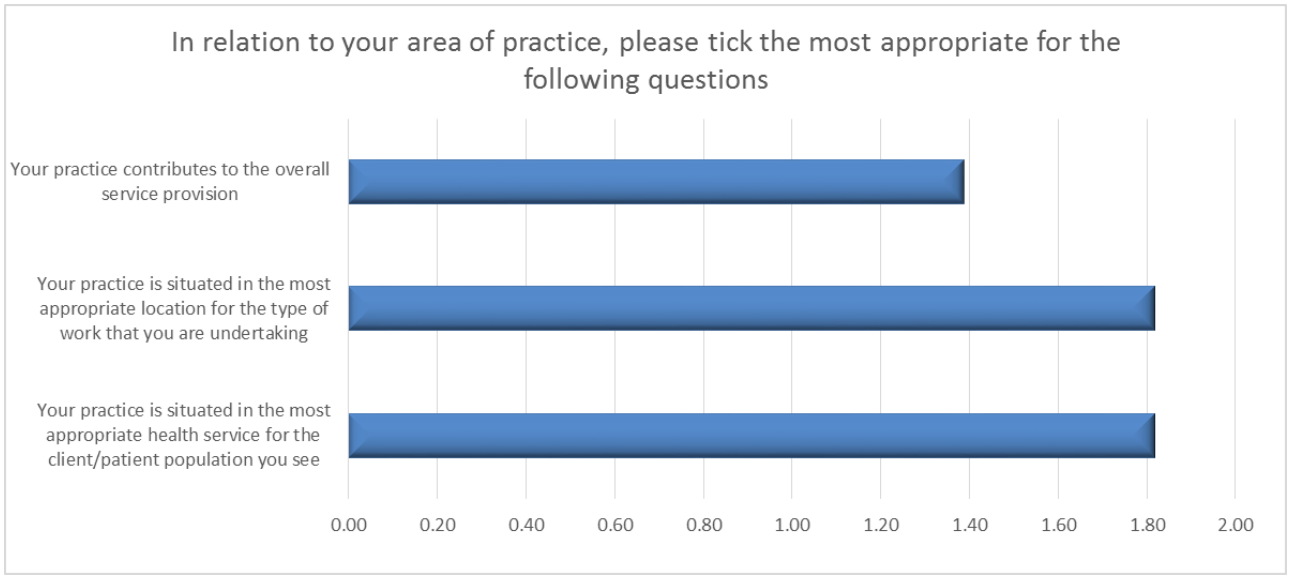

Figure 24: Qu 32- Appropriateness of service

I locate myself where I need to be...outpatient clinic, within the NGO offices or home-visits if necessary.

I provide a mobile service that enables me to visit the patient where it is most appropriate.

I have noticed that I am not currently in the right centre to provide care to the population who need it most. Pt's and public health have also voiced their concerns regarding my current placement.

Reduced waiting times in secondary care, no DNA [Did not attend]

Holistic care, chronic care management, addressing multiple issues in one visit as per patient priority, address barriers to care, same day access to care for acute presentations by myself or another clinician... joining the dots.

Development of an early intervention model/responsive service. Has shown evidence of preventing admission/decreased admissions; improved waiting times.

Improvement in financial efficiencies is difficult to determine - there are definitely more efficient use of GP services, for example, and less hospital admissions (which are costly in terms of ambulance transfers and nursing time); however whether these savings are more than the cost of employing me I am not sure. By employing me, the organisation has without any doubt, saved the DHB significant costs, by being able to keep patients with complex needs out of the public hospital, by reducing unnecessary hospital transfers and therefore unnecessary investigations and treatment.

I think the biggest success is patient outcomes and clinical safety and the fact that I am widely accepted for expertise and also being involved in guide lines and policy development that I know is based on best practice. And I think probably reducing the [clinical specialty] rate by 20%.

Some NPs further identified issues that demonstrate the disparity between medical benefits and NP benefits, for example;

I provide the same, if not better (in many respects) service than the locums who cover my non clinical time/days off etc.....for a third to quarter the amount of salary, fringe benefits. I'm expected to work under the conditions of the medical officer in terms of non-clinical time which is one day per fortnight. They get a meal provided, I don't because it’s not in my contract.

When asked if the NP role had been accepted into the service, 84.8% (n=28) said that they were, whilst 12.1% (n=4) said that they were unsure. Twenty respondents commented that the road to acceptance had been a difficult one and many indicated that it is not yet entirely settled even after a period of time in a NP position, for example;

I’ve had to work really hard to do that locally, regionally, still developing

New role, tall poppy syndrome - management not always accepting of this role. No concerns from nurses now, although some were sceptical at first. We now have another nurse heading down this track and the management and some GPs more accepting now.

Continues to be reluctance/patch protection with many consultant [medical specialist], but not those whom I work with. GPs seem very accepting of it now. Hard to say with nursing...mixed thoughts.

Within the practice definitely. The local PHO however is not very open to the utilisation of NPs yet and neither is the DHB. Those that I work directly with have been complementary in how useful my contribution is.

In wider PHC context and also secondary care. Just having issues with management lack of understanding which is negatively impacting on my NP role.

Generally it is well accepted, although even after nearly 5 years as an NP there is still some misunderstanding from individuals regarding the wider extent of the NP role, how this is different from an RN (something I have worked hard to address). Within the MDT what nursing entails (RN) is often not understood well with people focussing on nursing tasks rather than assessment.

Policies only for RNs and GP's no mention of NPs. In fact a recent flow diagram of organisation structure had missed me as NP.

There are differences in opinion amongst the managers about how the role should fit in, and so may not be straight forward to finalise [policies for NP role]. Despite policy and processes that do currently exist, one manager in particular does not follow correct processes and refuses to allow me to see [patients] or be meaningfully involved in her facility (even though her manager tells her that she has to) - so policy is not always the answer.

There is resistance from some hospital based medical practitioners to accepting referrals, but these same people treat my GP colleagues in a similar manner.

When further exploring where the non-acceptance of the role was most evident, patients were ranked as highly accepting (1.44 rating average) and the community was least accepting (1.73 rating average).

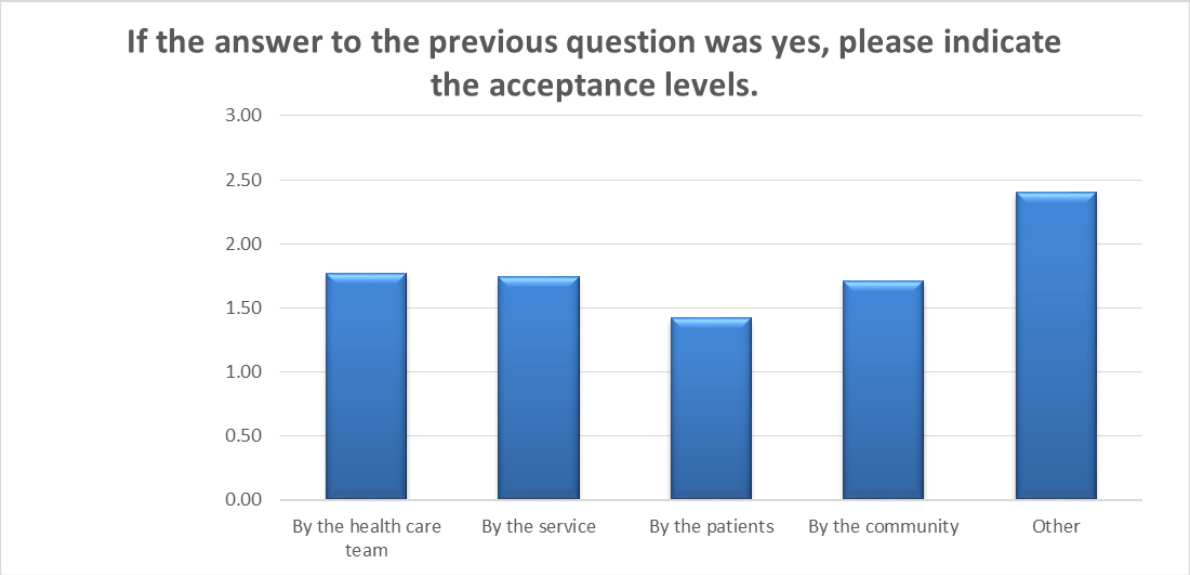

Figure 25: Qu 36 - Acceptance of the NP role (Rating average)

GPs where I work are very accepting, grateful and supportive of y role. It is a high needs and hard to recruit to area and hence the funding for my position. We have physicians at the hospital who are overseas and locum so forming and maintaining these relationships is ongoing. The team are very supportive, we try and work together and try to reduce duplication. I also work closely with the local nurse specialists to try and prevent duplication of services.

I don't know if I left whether the organisation would seek another NP to replace me. I would like to think they would and have tried to imbed the position rather than me.

All the time a NP has to be careful of the tall poppy syndrome which then creates more stuff to get around as well as develop the role....

When asked what factors support sustainability in NP practice the following results were found;

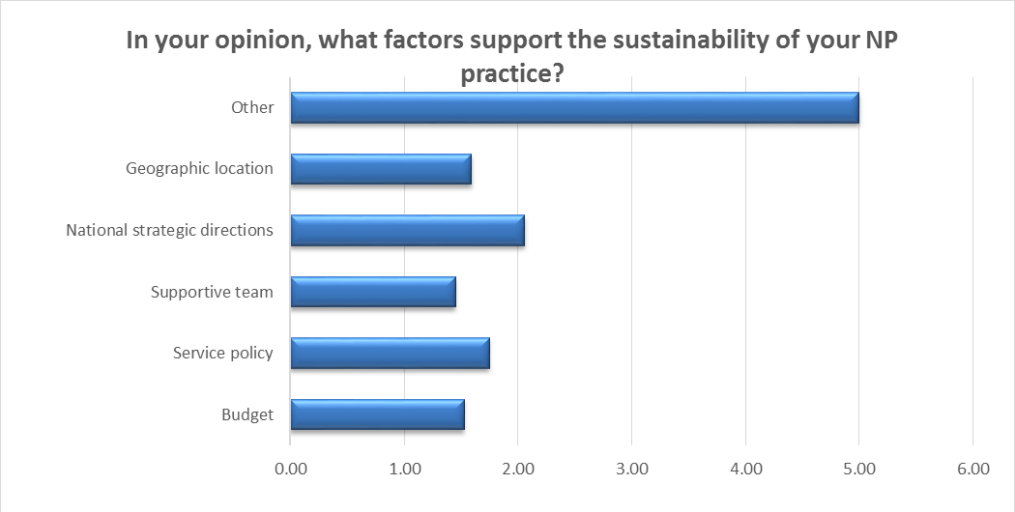

Figure 26: Qu 38 - Factors supporting the sustainability of NP practice (Rating average)

> No role is safe in a service management structure where nursing is not valued. However, since I have relieved the registrars supervising [patient cohort] & we have reduced the waiting list from 500 patients to <100 my role seems more valuable as they are freed up to do other work. It has also focused the service adding primary/secondary prevention/educational component & prescribing for risk factors increasing primary collaboration.
>
> Succession plan and cover for extended leave would also significantly support ability to sustain the role.

Negative factors preventing sustainability showed a contradiction in data, for example, although 19 respondents said that the budget supported NP sustainability, in this question 13 said that budgets negatively influenced any sustainability of the NP role. Likewise the point 'national strategic direction' also showed conflicting thoughts suggesting that 38.7 per cent of the time, it was a positive influence, but 42.9 per cent of the time it was not.

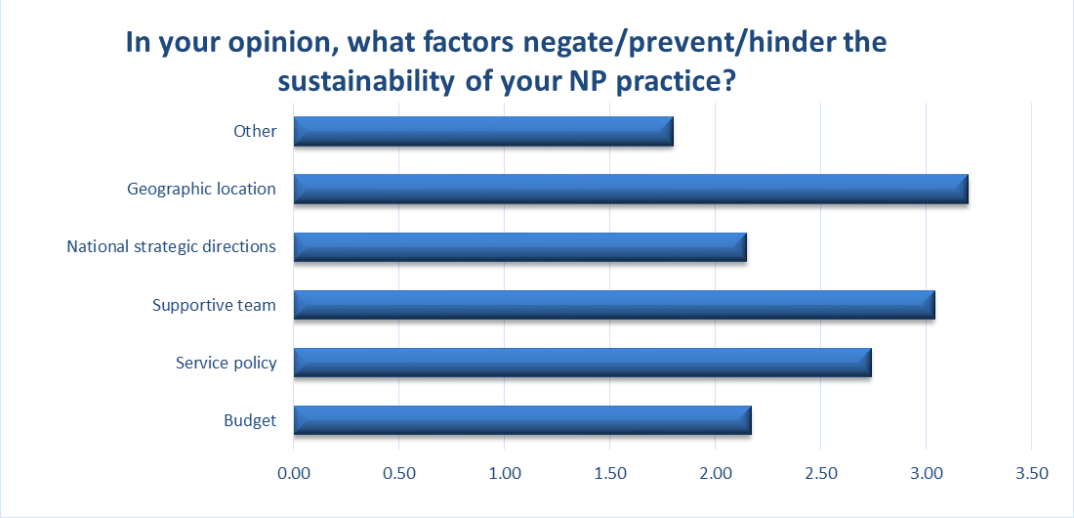

Figure 27: Qu 39 - Negative influences on NP role sustainability (Rating average)

> The lack of National (DHBNZ, Workforce NZ) policy to develop a sensible strategy for training and employing NP's.

> Not so much for my role but for other potential NPs the lack of formal support from the PHO and no focused funding for implementation of the role has meant there are no other PHC NPs within the region.
>
> Biggest barrier in my opinion is lack of drive/promotion/commitment from the MoH. The countries that have had the most success with implementing the NP role are those that have had a top down commitment to it i.e. the government committed to it, vision for roles, appropriate training programmes were established, roles established based on health needs of country and effective use of resources.
>
> I sorry I am in a bad space I feel isolated and pretty much disempowered, with no funding for NPs available there are no job opportunities available in PHC.

When asked what would help in improving the position of NPs within the workforce, 24 respondents commented, examples of which are;

> More visible NPs and more roles. Funding that is ongoing rather than each contract.
>
> Formal direction from the MOH regarding NP roles nationwide with clear pathways, budgets and education of role of NPs.
>
> Adequate professional development and mentorship.
>
> I think the NP role is NZ has to be given time to mature and become an integral part of health care (wherever) - we are still very much a novelty role and person dependent. If I resigned tomorrow there is nobody to take my place and the role would probably be absorbed into the [department] budget and employing another CNS. As noted above the journey to become an NP is often a personal goal / initiative and there is no clear plan at a national level to train NPs in the service areas that require them despite the fact that there is substantial data available that shows a major deficit in employable medical and nursing staff in the next 5-10 years.
>
> Better understanding and acceptance of advanced nursing roles, both within the organisation and across the NZ healthcare system in general. The integration of a wellness model rather than reliance on a medical model – I believe, particularly in [specialist area], that a medical model is unsustainable. Consistency across primary care about how the NP role is utilised and integrated. Every GP has their own opinion ad understanding of working with me. Communication on an individual basis is what makes it workable; however some kind of general consensus and processes would make it more efficient and perhaps give GPs more trust in the system.
>
> I think the NP role is NZ has to be given time to mature and become an integral part of health care (wherever) - we are still very much a novelty role and person dependent. If I resigned tomorrow there is nobody to take my place and the role would probably be absorbed into the xxx [place] budget and employing another CNS or MOSS...the journey to become an NP is often a personal goal / initiative and there is no clear plan at a national level to train NPs in the service areas that require them despite the fact that there is substantial data available that shows a major deficit in employable medical and nursing staff in the next 5- 10 years.

Discussion and Recommendations

This survey sought to find out what contributons NPs were making to PHC, specifically the access to care and the equity of that care within the New Zealand healthcare system. The focus of attention was on the NP's ability to cross service boundaries and to deliver this care regardless of position setting. To measure this, we used the Results Based Logic Model of Primary Health Care (Watson et al., 2004).

What the survey indicates is that NPs can and are, contributing to the New Zealand Primary Health Care Strategy by adapting the way they work in order to enhance the care that they provide to their client base, regardless of the boundaries that are imposed upon them by the healthcare system within

which they work. The summary of findings can be idenitified in a table that maps the key findings against the RBLM.

RBLM Parameters		NP responses
PHC EFFICIENCY	Contexts	→ Government support is rhetorical → Organisational support varied → Inconsistency in the national framework for NP development and implementation → NP roles appropriately positioned → Social determinants impact significantly on the health of populations regardless of ethnicity and geographical setting → Fragmentation of health care delivery is evident in spite of national PHC strategies → Population groups and ethnicity within NP practices are mixed regardless of geographical boundary → NPs cross acute/community boundaries routinely in care → Co-ordination of care and integration of services evident but significantly individually driven by NPs themselves → Social determinants are a significant factor affecting the health of all population groups
	Inputs	→ Office provision for NPs in most responses → Financial support for role development, implementation and sustainability varied with little consistency across the national health system → Little support for sick leave/annual leave – individually arranged, no real process → NP role interchangeable with RN and Medical officer roles (evidenced in positioning of the role and in leave replacement) → Inequity in the provision of professional development of NPs in relation to support provided nationally for medical officers → NPs are generally an older population of nurses
	Activities (enable PHC delivery)	→ Legislative parameters in place → Prescribing practice provision appropriate → Leadership for, and management of, the NP role varied – no consistent structure or process for reporting or line management → Creation of role largely individually driven by the NP → Role is mainly gap filling
	Outputs (products and services)	→ All parameters of care including PHC, co-ordination, case management driven largely by NP → Models of care not necessarily supported or planned by the organisation → MDT team collaboration with NPs positive
PHC EFFECTIVENESS	Immediate (direct outcomes)	→ Good knowledge of population within practice → NP models of care support integration of care and improvement in the management of care → Patient focused – NPs will go beyond position requirements in the provision of care within scope of practice
	Intermediate (direct outcomes)	→ Appropriate location of practice → System efficiency fragmented and not consistent → Acceptability of role and work excellent – patients and service; guarded acceptance from nursing colleagues → Lack of service consistency in relation to access to care and the equity of care demonstrated across all responses
	Final Outcomes	→ NP role not yet sustainable as funding support fragmented and position/individual driven → Significant evidence that individual NPs are making a difference regardless of service support → NPs individually contributing to improved level and distribution of health and wellness

Figure 28 - Summary of findings of NP positions and care against RBLM

Leadership

Although the leadership and support for NP position development and implementation was not specifically asked about in the survey or interviews, this was referred to by respondants in many ways throughout. These findings are contrary to those stated by HWNZ in making provision for "better use of the existing health workforce, from untrained workers to highly specialist, by developing new roles and extending existing roles to make best use of the skills of all members of the health care team" (HWNZ, n.d.).

NPs consistenly acknowledged their support from the clinical team with which they associated and/or worked. Whilst this is a positive outcome because that is where NPs roles should be firmly located, NPs also cited the lack of support by their immediate management. It is well known that the development of any new role takes time and requires a co-ordinated and focused vision and strong, co-ordinated leadership for it to succeed. Whilst the NZ government initially led the NP role development in 2001, providing the legislative framework for it and annoucing the role as essential to healthcare delivery in New Zealand, commentaries suggest that the ongoing national support is not as strong as was perceived or expected. The need for enduring support has been noted in a Canadian study by Sangster-Gormley, Martin-Misner, Downe-Wamboldt, & Dicenso, (2010) who identified the necessity for a strategic direction, contending that for the NP role to be fully implemented and accepted, there needs to be an "interconnectedness of intention, involvement and acceptance" (p. 6). Furthermore, the authors note that introducing a new role into the health system "cannot occur in isolation of the overall system because contextual and environmental issues influence the process" (p.2).

Policy implications

This study was primarily aimed at measuring the effectiveness of NPs to provide PHC in their practice. When searching for supporting documentation that was freely available on the Internet, there was an absence of any subsequent national documentation related to the Primary Health Care Strategy for NZ first launched in 2001 (King, 2001), although individual DHBs have since reported their PHC progress. Thus, the health workforce on NZ is working from a strategy that is 13 years old and as yet, has not been appraised or revised. For NPs to develop collaborative models of care based on evidence, they would require to look globally for other examples and adapting it to local need.

Entitlements

The inequity of position entitlements was evident. NPs noted their role seems to be interchangeable with medical officers and RNs when it suits the service to do so, for example during periods of leave, yet not receiving equitable support for continuing education or maintenance of competence, a factor required by the NCNZ for ongoing registration. When searching for pay entitlements for NPs, it was noted that they are not mentioned on the Primary Health Care Multi-employer Collective Agreement (PHC MECA, n.d). On the District Health Boards / NZNO Nursing and Midwifery Multi-employer Collective Agreement (New Zealand Nurses Organisation, 2012), NPs are mentioned in a definition but not on the pay scale. Instead their pay scale is amalgamated with that of Registered Nurses and/or managers. This in itself is misleading for what is a very senior clinical role, making invisible, the role of NP. The only place that NPs were mentioned as individual clinical roles was in the Accident Compensation Corporation (ACC) where the rates for invoicing and payment are identified (ACC 2014).

Acceptability

Generally, NPs saw their role as being accepted by their clients and felt as if they were part of the clinical team. Respondents verbalised issues around the fact the no-one knew what the role of NP did. Managers and medical officers were identified as not always supporting the role, as well as nurses in both clinical and managerial roles. In regard to the clinical perspective, this is where the true effectiveness of the role can be identified, yet there is little research to demonstrate the models of care and outputs these roles are having. Importantly, their contribution toward bridging equity gaps and health service boundaries should be examined, particularly in the face of increasing chronicity, rising health care costs and the role that social determinants have on the health of individuals, families and communities.

Workforce planning

Throughout the survey, the lack of consistent planning for the NPs was evident and this has been discussed previously. What is also of concern is the age of NPs at the beginning of their NP career. Whilst the nursing regulatory authority is justifiably cautious in their requirements for NP registration, there needs to be some discussion around how the competence of NPs can be measured whilst attracting younger nurses to this career pathway. Until the advent of the NP role, nurses had to branch out into managerial, research or education roles in order to progress along a more senior career pathway. Many of these jobs have been taken up by expert clinical nurses, many of whom may well have remained expert clinical nurses if they had a career path to progress on. Despite this exciting opportunity, NPs have highlighted the very cautious approach by nurses themselves towards NPs.

Further Research

Further research building on this study will be undertaken by the researchers in conjunction with researchers involved in the pilot study in Australia, and with the researchers responsible for researching the Canadian Inequity Model (Browne et al., 2012).

Limitations

The population of NPs in NZ is small, and although this study captured 25 per cent of the cohort, the numbers are small making rigorous calculations of data difficult. It essentially relied upon the support of CDA to examine the information provided in the surveys. Countering that however, was the ability to the researchers to explore documents that support the participants' claims, further adding value to the information provided.

In spite of the questions focussing on clinical and professional practice, the lack of leadership and managerial support was evident in responses. Questions around leadership could have been expanded to gain more insights into the issues the participants presented.

The use of the RBLM was appropriate to use in this novel manner simply because there are few models that could have supported the exploration of themes and text that NPs offered in showcasing the work they are doing in regard to equity and access, and bringing PHC to their clients, in the manner that they described.

Conclusion

This study has enabled the researchers to identify the worth of NPs in bridging the gap of access and equity across health services and boundaries. The study has indicated that NPs are making a difference in their individual roles. The data has also identified the deficits of strategic direction, planning and evaluation of the role and highlighted the inconsistent implementation of NP positions. The question now is why the impetus of the NP development has waned when the need for patient choice and access to care in environments where health care needs for consumers are not being met. That was the original intent of introducing the NP scope of practice.

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Appendix 1 – Interview Questions

Interview Guide

"Nurse Practitioner Practice and their Impact on Primary Health Care Delivery"

Thank you for taking the time to participate in this interview. Just to begin, I need to confirm with you that you are happy for us to proceed with this interview.

The questions we ask are prompts for you tell us, in your own words, about your practice. You can add any additional information your think is relevant to this interview.

You understand that you can request to discontinue this interview at any time, and that you can ask to stop the recording for sensitive issues that you do not want included in the research. You understand also, that we can provide you with a copy of this recording and the transcript on request.

So, recording is now commencing, and for the record, please state your name and where you work. This information is for your records, and not for the research.

1. Please describe the geographical situation within which you work (e.g. rural, metropolitan, small town etc.)
2. Please describe the work that you do.
3. Tell us a little about the service you are working in.
    a. Where do you do your work?
    b. Do you have prescribing? (If you do not, do you intend getting this when the NZNC regulations change in 2014)
4. How often do you work "just an eight hour day"?
5. How long have you been nursing?
6. How long have you been employed as a NP?
7. Were you ever a CNS prior to becoming an NP?
    a. How would you describe the difference in your role from CNS to NP?
8. Are you paid according to the MECA or individual contract?
    a. What influenced your choice in contractual arrangements?
9. Can you tell us how long it was between registering as a NP and obtaining a position as a NP?
    a. Who supported you in gaining this position, and preparing for it?
    b. What support structures were put in place for you?
10. Can you tell us about your experiences when you first commenced work as a NP?
11. Can you tell us what you really wanted to achieve when you first commenced work as a NP?
    a. How has that changed?
12. Tell us about the successes in your work.
    a. What has your role done to support access to care for the patients?
13. Describe the issues and problems that you have encountered on this journey.
14. How do you know that you are making a difference in your practice?
15. What records do you keep and has this supported the sustainability of your work?

Appendix 2 – Copy of Survey

Information and Electronic Survey

"Nurse Practitioner Practice and their Impact on Primary Health Care Delivery"

This project seeks to examine the contributions that registered Nurse Practitioners provide to health care regardless of practice setting. In particular we want to explore the impact of care on the community, explore the partnerships that you develop across health and community boundaries, and how patient access to care is possible within them.

The research is divided into two parts; an online survey followed by an invitation to participate in an interview.

The study uses a Results Based Logic Model for Primary Health Care that was developed by Broemeling & Watson (2009)[8] who developed a model that would assist in identifying the actual care provided by clinicians and services that supports equality of care and enhanced access to care.

The survey

We are seeking your participation to undertake an online survey which will take no more than 30 minutes of your time.

- The survey is anonymous.
- Submission of the survey indicates consent to participate in it.
- You can choose not to answer any question and there is space for you to add comments.

The Interview

Interviews will take no more than one hour of your time.

At the end of the survey, you will find a section that invites you to participate in an interview. Please complete this section before submitting the survey, only if you would like to participate in an interview.

Completion of this section with the provision of your name and contact details, indicates consent to interview. The researchers will contact you to arrange a time for an interview only if this section has been completed.

- A copy of your transcript will be given to you on request.
- No other person will have access to the actual recordings.
- You have the right to withdraw from the interview at any time.
- Results of the interview will be collated and analyzed as part of the research study.

Confidentiality of information in the survey and interviews

- Your responses will be entirely confidential and will be viewed by the researchers only.
- Anonymity cannot be guaranteed but no names, places or mention of specific information that could directly connect the information to you will be used in the analysis and writing up of the project.
- As this study is seeking your personal experiences as a Nurse Practitioner, your service or organization will not be approached and no information relating directly to it will be used.

[8] Broemeling, A-M, & Watson, D. (2009). *Measuring the Performance of Primary Health Care: Existing Capacity and Potential Information to Support Population Based Analyses Health Care Policy*, 5(Special Issue), 47 - 63.

- The use of audio recording will be used in the interview process.
- Recorded information will be transcribed by the researchers and their affiliated professional transcribers.
- Only transcribed and coded information will be used in the research study, reports and publications relating to the study.
- Raw data will be kept electronically in a secure electronic folder on the Eastern Institute of Technology electronic platform.

Rights of participation

- Your participation is entirely voluntary.
- You do not have to answer all the questions posed to you in either the survey or the interview.
- Your participation will not jeopardize your employment in any way.

Thank you for your participation.

1. Dr Clare Harvey, Senior Lecturer, Faculty of Health Sciences, Eastern Institute of Technology, email charvey@eit.ac.nz
2. Dr Elaine Papps Senior Lecturer, Faculty of Health Sciences, Eastern Institute of Technology, email epapps@eit.ac.nz
3. Ms Jennifer Roberts Assistant Head of School, School of Nursing, Faculty of Health Sciences, Eastern Institute of Technology, email jroberts@eit.ac.nz

You may now proceed to the survey

The Survey

Thank you for participating in this survey.

This survey will take no more than 45 minutes of your time.

Please complete the survey online using the following link to access the survey

---

1. How long have you been registered as a Nurse Practitioner in New Zealand?

3-5 years ☐

6 – 10 years ☐

11 – 20 years ☐

2. How long have you been nursing?

3-5 years	☐
6 – 10 years	☐
11 – 20 years	☐
21 – 30 years	☐
31 years and over	☐

3. What specialty area do you practice in as a NP?

Acute	☐
Chronic	☐
Community	☐

4. Please list actual clinical area(s) of practice

5. Is your geographic region considered

Metropolitan	☐
Rural	☐
Remote	☐
Regional	☐

6. Have you worked as an advanced practitioner in other countries? Yes ☐ No ☐

   If yes, name the countries

7. Please list the cultural/ethnic backgrounds that you work with?

8. Within this population, is there a high percentage of migrants?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

9. Are there any social determinants that you believe impact on the provision of health care where the accepted definition is "*Social determinants are those conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels"* (World Health Organization http://www.who.int/social_determinants/en/)

Yes ☐ No ☐ Unsure ☐

If yes, please list those that you consider influence health care delivery in your practice

10. Which of the following concepts best describes your practice setting?

Specialist care ☐

Secondary care ☐

Tertiary care ☐

Primary care ☐

Primary health care ☐

Supportive care ☐

Palliative care ☐

Preventive ☐

Curative ☐

Rehabilitative ☐

Please provide further comments or examples from your practice

11. Do you have a designated office and delegated budget?

Yes ☐ No ☐ Unsure ☐

If yes, please list those that you consider influence health care delivery in your practice

12. Who do you report to?
    Manager (medical) ☐

    Manager (Nurse) ☐

    Manager (other) ☐

    Solo practice ☐

    Private practice ☐

    Other ☐

13. Are you employed as a NP only or do you also work in another nursing role?
    Clinical Nurse Specialist ☐

    Registered Nurse ☐

    Other ☐

    Comments

14. Your position is maintained by,
    Sustainable funding ☐

    Project funding for limited time ☐

    Short term contract ☐

    Other ☐

    Comments

15. What professional development allocation do you have annually?

Yes ☐ No ☐ Unsure ☐

If yes, please list those that you consider influence health care delivery in your practice

16. Do you have any professional nursing mentorship?

Yes ☐ No ☐ Unsure ☐

If yes, please list those that you consider influence health care delivery in your practice

If Yes, from whom?

17. What technology/electronic support do you have?

Computer ☐
Mobile phone ☐
Clinical software ☐
Other ☐

Comments

18. Do you have a NP replacing you for annual and sick leave?

Yes ☐ No ☐ Unsure ☐

If yes, please list those that you consider influence health care delivery in your practice

If NO, who replaces you?

19. Do you work in a multidisciplinary team?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

20. Which of these best describes the autonomy you have in clinical decision making?

I manage my own case load ☐

I co-ordinate care and I am able to make changes to the clinical plan as required ☐

I am able to refer patients to other health professionals ☐

I receive referrals from other health professionals ☐

I co-ordinate care for a medical practitioner/medical team who makes the final decisions on clinical management ☐

I make clinical decisions but I do not prescribe ☐

I make clinical decisions but I do not order diagnostic tests ☐

I follow up on the care plans ☐

I have no real clinical decision making autonomy ☐

Please provide further comments or examples from your practice

21. Regardless of area of practice, do you consider your practice as being within a wellness paradigm?

Yes ☐ No ☐ Unsure ☐

Please comment

22. In developing your Nurse Practitioner role, have you been given the authority to make changes in how health care is provided?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

23. Do you practice using evidence based frameworks?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

24. Are there adequate organisational policies that support your practice?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

25. Please indicate which of the following clinical guidelines support your practice

Own NP developed guidelines	☐
Service approved clinical practice guidelines	☐
Service approved protocols	☐
Organisational wide clinical policies	☐
National clinical directives	☐
Other	☐

Please provide further comments or examples from your practice

26. In your role do you assist clients to maintain or improve their work life?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

27. Does your role increase knowledge about health and health care among the population?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

28. In your role do you believe that you reduce the risk, duration and effects of acute and episodic health conditions?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

29. In your role do you perceive you reduce the risk, duration and effects of continuing health conditions?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

30. Do you believe that your practice is situated in the most appropriate health service for the client population you see?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

31. In your opinion is your practice situated in the most appropriate location for the type of work that you are undertaking?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

32. Since developing your NP practice, can you identify areas in your practice that have directly contributed to care efficiencies?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

33. Please tick what best describes these efficiencies:

Access to care	☐
Continuity of care	☐
Reduction in health care costs	☐
Greater integration of services	☐
Improved multidisciplinary care	☐
Improved financial efficiencies	☐
Other	☐

Please provide further comments or examples from your practice

34. In your opinion, has your role as NP been accepted within the health care service?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

35. If the answer to the above question was yes, please indicate where the acceptance is best described:

By the health care team	☐
By the service	☐
By the patients	☐
By the community	☐
Other	☐

Please provide further comments or examples from your practice

36. In your opinion has the introduction of your NP role improved the access to care?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

37. In your opinion has the introduction of your role improved the equity of care you provide to your community?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

38. In your opinion do you believe that your role as a NP is sustainable?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

39. What factors, in your opinion, support the sustainability of your NP practice?

Budget	☐
Service policy	☐
Supportive team	☐
National strategic directions	☐
Geographic location	☐
Other	☐

Please list others and/or comment

40. What factors, in your opinion, negate/prevent/hinder the sustainability of your NP practice?

Budget	☐
Service policy	☐
Supportive team	☐
National strategic directions	☐
Geographic location	☐
Other	☐

Please list others and/or comment

41. In your opinion, has your practice contributed to the overall service provision?

Yes ☐ No ☐ Unsure ☐

Please provide further comments or examples from your practice

42. Please describe aspects that you consider would further support or enhance your practice and the care that you provide.

43. Is there anything else you would like to share with us?

Please complete the following section ONLY IF you agree to be interviewed

---

CONSENT FORM FOR PARTICIPATION IN RESEARCH

(By interview)

I .....being over the age of 18 years hereby consent to participate as requested in the interview for the research project "Nurse Practitioner Practice and their Impact on Primary Health Care Delivery"

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and to the participation in the interview on condition that my identity is not revealed.
4. I understand that:
    - I may not directly benefit from taking part in this research.
    - I am free to withdraw from the project at any time and am free to decline to answer particular questions.
    - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.
    - Whether I participate or not, or withdraw after participating, it will have no effect on my employment or professional standing.
    - I may ask that the recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.

By submitting the information below I accept that I have consented to interview and that I will be contacted by the researchers to arrange a time for interview.

Name:

Contact number:

Email:

You may print this page as evidence of your consent to participate in an interview.