COVER SHEET

Title: Nurse Practitioner competency standards: findings from collaborative Australian and New Zealand research

Authors: ***** Glenn Gardner RN, PhD FRCNA
Professor of Clinical Nursing
Queensland University of Technology and Royal Brisbane and Women's Hospital

Jenny Carrier RN, PhD FCNA(NZ) MNZM
Professor of Nursing
Massey University and Mid Central District Health Board

Anne Gardner RN, PhD MRCNA
Associate Professor in Nursing
Deakin University and Cabrini Health

Sandra Dunn RN, PhD FRCNA
Professor of Clinical Nursing Practice
Flinders University and Flinders Medical Centre

Contact Author: * Professor Glenn Gardner
School of Nursing
Queensland University of Technology
Victoria Park Road
Kelvin Grove, Queensland 4059
Australia

E-mail: ge.gardner@qut.edu.au
Phone: +61 7 3636 5395
Fax: +61 7 3636 1557

Acknowledgments

This project was sponsored by the Australian Nursing and Midwifery Council and the Nursing Council New Zealand. We also wish to acknowledge the contribution of the nurse practitioners and the nurse practitioner course coordinators in Australia and New Zealand who all generously gave of their time to participate in the study.

Abstract

Background: The title, Nurse Practitioner, is protected in most jurisdictions in Australia and in New Zealand and the number of nurse practitioners is increasing in health services in both countries. Despite this expansion of the role there is scant national or international research to inform development of nurse practitioner competency standards.

Objectives: The aim of the study was to research nurse practitioner practice to inform development of generic standards that could be applied for the education, authorisation and practice of nurse practitioners in both countries.

Design: The research used a multi-methods approach to capture a range of data sources including research of policies and curricula, and interviews with clinicians. Data were collected from relevant sources in Australia and New Zealand

Settings: The research was conducted in New Zealand and the five states and territories in Australia where, at the time of the research, the title of nurse practitioner was legally protected.

Participants: The research was conducted with a purposeful sample of nurse practitioners from diverse clinical settings in both countries. Interview and material data were collected from a range of sources and data were analysed within and across these data modalities.

Results: Findings included identification of three generic standards for nurse practitioner practice namely, Dynamic Practice, Professional Efficacy and Clinical Leadership. Each of

these standards has a number of practice competencies, each of these competencies with their own performance indicators.

Conclusions: Generic Standards for nurse practitioner practice will support a standardised approach and mutual recognition of nurse practitioner authorisation across the two countries. Additionally these research outcomes can more generally inform education providers, authorising bodies and clinicians on the standards of practice for the nurse practitioner whilst also contributing to the current international debate on nurse practitioner standards and scope of practice.

Key words; Nurse practitioner, capability, practice competencies, practice standards

What this paper adds

What is already known on this topic?

- Development of the nurse practitioner role around the world has been dogged by inconsistency in terms of role definition.
- There is no evidence in the literature of the development of research-informed competency standards for the nurse practitioner.
- The literature on practice competencies is scant with most of the information being related to competencies for advanced practice or clinical nurse specialist roles and few of these are informed by empirical research.

What do we now know as a result of this study?

- The competency framework that defines the expectations of nurse practitioner practice is structured across three generic Standards namely, Dynamic Practice, Professional Efficacy and Clinical Leadership.

- In addition to this competency framework, nurse practitioner practice must accommodate a wide range of practice environments, deal with complexity and non-linear reasoning in health-care and draw upon creative and non-standard solutions to achieve optimal outcomes for the client.
- Nurse Practitioner Standards also need to be informed by an approach to evaluation of the clinician that can accommodate the above characteristics. A useful model to achieve this orientation is that related to the notion of *capability*

Introduction

In Australia, responsibility for nurse regulation resides with the nursing regulatory authority in each, of the eight states or territories. Across Australian states and territories there are over 30 separate Acts related to the regulation of nursing practice, for example, Nurses Acts, Controlled Substances Acts, Mental Health Acts and Public Health Acts. The Australian Nursing and Midwifery Council (ANMC [at the time of the research the Council was titled the Australian Nursing Council]) is the peak national organisation through which the Australian states and territories formally negotiate consistent national standards for the regulation of nursing practice.

In New Zealand there is a single nursing regulatory authority, the Nursing Council of New Zealand, with responsibility for national regulation of nursing practice. The powers and duties of the Nursing Council New Zealand are similar to those of the Australian state and territory nursing regulatory authorities, but at a national level. Functioning of the Nursing Council New Zealand and national nursing policy development in New Zealand is facilitated by a national approach to nursing regulation.

In Australia and New Zealand the nurse practitioner is a new and unique level of health-care provider. Development of the nurse practitioner role has been driven in part by the health-care reform agenda. As described by the ANMC and Nursing Council New Zealand, the shifting boundaries caused by health-care reform have created impetus for development of new models of health-care, but have also created some uncertainty regarding the boundaries, models of care and rights and responsibilities of nurse practitioners. The title, nurse practitioner, is now protected in most Australian states and in New Zealand with its role

benefiting from significant development over a relatively short period of time. However the role is still evolving in both countries.

The Trans Tasman Mutual Recognition Act 1977, as its title implies, includes the requirement that registration in Australia and New Zealand be mutually recognisable. In February 2002 the ANMC and Nursing Council New Zealand formally committed to collaborative development of the nurse practitioner role under a Memorandum of Cooperation. This research was conducted to develop standards for nurse practitioner practice and education. The study was commissioned jointly by the two organizations and is a result of this Memorandum of Cooperation. This paper will report on these research findings.

Background

Numerous papers have been published in health-care journals on the topic of nurse practitioners but there is scant published research relating to nurse practitioner competencies. To investigate this topic the research team conducted a specific review of the literature. The keywords used for the search included: nurse practitioner, advanced practice nurse, scope of practice, nursing role, competency standards. The electronic data bases explored included CINAHL, Medline, PubMed and HighRisk. No hand search was undertaken as nurse practitioner literature was distributed widely in the nursing and related health literature. The reference lists of papers were scanned manually to find other literature not identified in the electronic search. The main search was limited to the past six years of publication (Jan 1999–Dec 2004 inclusive).

Development and progress of the role

Nurse practitioners have had a presence in health-care delivery in some countries since the 1960s, more recently emerging in Australia and New Zealand. There is considerable international literature to support the introduction of a nurse practitioner level of service with studies demonstrating that the nurse practitioner delivers health-care that is valued by the patient, (Kinnersley et al., 2000; Venning et al., 2000) and has a positive effect on patient outcomes (Brown and Grimes, 1995; Sakr et al. 1999; Gardner, A and Gardner, 2005). A systematic review of nurse practitioner service in primary care demonstrated that nurse practitioners provide care equivalent to doctors at first point of contact with patients (Horrocks et al. 2002). Furthermore, the review indicated that patients were more satisfied with care by a nurse practitioner and that the care was of a high quality. Whilst we propose that the benchmark of medical care does not by definition indicate quality, the research is a useful addition to other, patient-focused outcome indicators. It also appeared that better use of nurse practitioners could improve primary health-care access (Donald and McCurdy, 2002). Despite these positive findings, the development of nurse practitioner services around the world has been dogged by inconsistency in terms of role definition, level of legislative control and funding issues (Pearson and Peels, 2002).

In Australia and New Zealand anticipation about the promise of nurse practitioner practice has arisen in part from the sets of statements, sometimes called competency statements or competency standards, about advanced practice. These statements have been developed by professional and regulatory organisations (Australian Nursing Federation, 1997; Nursing Council of New Zealand, 2001; Royal College of Nursing Australia, 2000) and are similar to some used overseas (American Nurses Association, 2002; Carroll, 2002).

Nurse Practitioner Competencies

Historically, competency assessment has applied to manual work where academic learning and intelligence testing were not relevant to occupation performance (Winter and Maisch, 1996). They became important in the vocational education sector in the early nineties in Australia through a drive to formulate measurable industry standards for work practices (Keating, 1994). This subsequently influenced the adoption of this approach in Australia by nursing (Sutton and Arbon, 1994) as well as other professions. Competency benchmarks are used in Australia for nursing undergraduate education and regulation through the ANMC competencies. In the same way, Nursing Council New Zealand competencies are used for undergraduate nurse education and advanced and specialist competencies are used for postgraduate programs. In the UK competency training and assessment is integral to undergraduate nurse education (UKCC, 1999) where formal assessment of clinical competency has replaced the previous episodic task assessment and the more recent continuous clinical assessment (Watkins, 2000) approaches.

In a systematic review of clinical competence assessment Watson and colleagues (2002) concluded that there was almost universal acceptance of the need for assessment of clinical nursing competence but that reliability and validity of assessment methods remain vexed and could not be found in the published literature. Assessment of clinical competence was identified as a particular issue when trying to distinguish between different levels of competence (Girot, 2000). Nonetheless, without a superior alternative, regulatory authorities are looking to demonstrate safe standards for nurse practitioner practice by use of competency standards.

In relation to nurse practitioner standards there is no evidence in the literature of the development of research-informed competency standards. The literature on competency for this level of clinical practice is scant with most of the competency information being related to advanced practice competencies or clinical nurse specialist competencies. The research outcomes reported in this paper therefore provide an essential basis for application, discussion and advancement of generic nurse practitioner competency standards.

In addition to the international relevance of this study, in Australasia mutually agreed competency standards will ensure that there is a consistency in the preparation and authorisation of nurse practitioners. Given the longstanding mutual recognition agreements between Australian states and territories and between Australia and New Zealand, this research has the potential to standardise nurse practitioner education and practice between these jurisdictions and to inform the international movement in standardisation of the nurse practitioner role.

The Research

The competencies reported in this paper were developed from a research project that was commissioned by the ANMC and Nursing Council New Zealand. The primary aim of the project was to develop national/trans-Tasman competency standards for the recognition and education of nurse practitioners in Australia and New Zealand. It is beyond the scope of this paper to fully report the analytical and interpretive processes that describe the research findings. The reader is directed to the ANMC report (Gardner et al 2004) for details of the research results. However in order to contextualise the competencies that are reported here as research outcomes, we will briefly describe the research process that was used for the study.

Methods

The methodology for this study needed to draw upon data relating to current practices, established processes across a range of jurisdictions, documentary evidence, unpublished literature and the experiential aspects of the nurse practitioner level of service in different geographical and clinical contexts of practice. Accordingly, the research design incorporated a multi-methods approach. A range of data collection tools was developed and a variety of data sources was used. This incorporated research of policies and curricula, and survey and interviews with academics and clinicians. Data were collected from relevant sources in New Zealand and the five states and territories in Australia where, at the time of the research, the title of nurse practitioner was legally protected. The data relating to the development of a competency framework was primarily drawn from in-depth interviews with authorised and practising nurse practitioners and published and grey literature related to nurse practitioner practice.

Data management

The in-depth interviews with nurse practitioners were conducted to gain information on the practice experiences of nurse practitioner work. This included a report of a de-identified case study that represented for that participant an exemplar of nurse practitioner service. The interview focused on the clinical and experiential dimensions of management for the patient/client in the case study. These interviews were audio recorded and transcribed to produce text data. These data were analysed to gain understanding of the core role of the nurse practitioner as perceived and reported by these clinicians, and included both deductive and inductive methods. An inductive process was used to order the data according to recognised patterns within each interview then these data were aggregated across the data set according to identified storylines. The storylines were then collated into several conceptual

categories. The text data was further reviewed to identify textual samples that best captured the storylines in the analytical framework.

Relevant university ethical approval for the study was secured. Informed consent was obtained from all interviewee participants. As far as possible, the identity of individuals who participated in the study has been protected.

Findings

The objective of this research was to develop core standards that could inform nurse practitioner competencies for education and practice. The first step in developing these standards was to draw upon the research findings to describe the core role of the nurse practitioner, the characteristics of this core role establish the thread that continues through to define the generic standards and practice competencies.

The findings indicate that the core role of nurse practitioner practice is characterised by three areas of practice, each of these three areas has several components that define the practice characteristics (Figure 1).

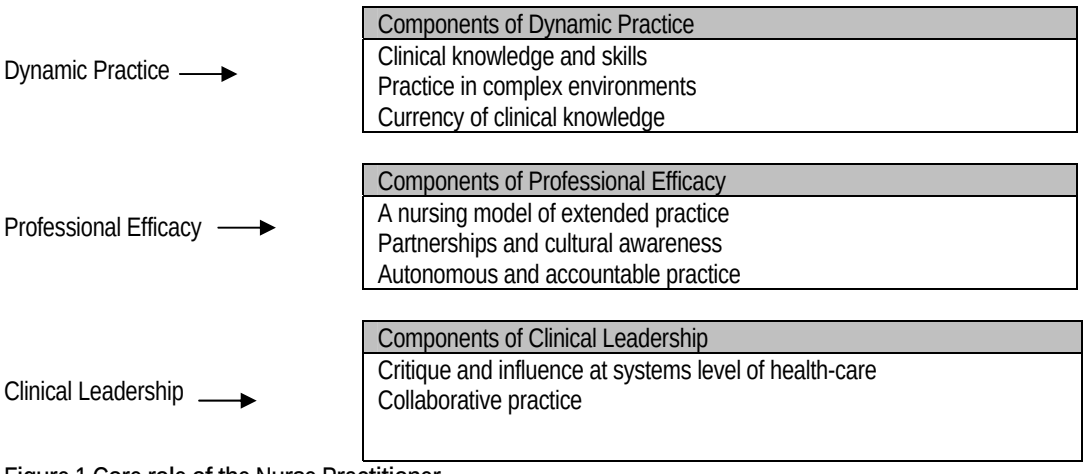

Figure 1 Core role of the Nurse Practitioner

P*ractice is dynamic* in that it involves the application of high-level clinical knowledge and skills in a wide range of contexts. The nurse practitioner in the role demonstrates *professional efficacy* enhanced by an extended range of autonomy, including legislated privileges. The nurse practitioner is a *clinical leader* with a readiness and an obligation to advocate for their client base and their profession at the systems level of health-care. This combination of practice areas and defining characteristics that make up the core role of the nurse practitioner provides a strong, research-based platform for development of standards and competencies for nurse practitioner practice.

An additional finding from this research was the recognition that the practice of the nurse practitioner is qualitatively different from that of other roles and levels of nursing. Generic Standards for nurse practitioner practice in Australia and New Zealand must accommodate practice environments that range from highly technical care in large tertiary facilities to sole clinicians who practice in isolated and remote settings. They must deal with complexity and non-linear reasoning in health-care and draw upon creative and non-standard solutions to achieve optimal outcomes for the client.

Our conclusion from analysis of our research data and the literature is that in addition to a competency framework, Nurse Practitioner Standards also need to be informed by an approach to evaluation of the clinician that can accommodate these characteristics. A useful model to achieve this orientation is that related to the notion of capability (Stephenson and Weil, 1992; Hase and Kenyon, 2000). According to Hase (2000) capable people are more likely to be able to deal effectively with the turbulent environment in which they live (or work) by possessing an all-round capacity to deal with continual change. Cairns (1997) defined capability as ‘having justified confidence in your ability to take appropriate and

effective action to formulate and solve problems in both familiar and unfamiliar and changing settings'.

Hence, the competency framework that follows outlines the knowledge, skills and attitudes of nurse practitioner practice that is located at the extended level of nursing service and also sets a standard for capability attributes. Many of the competencies are measurable and all are observable

Nurse Practitioner Standards

The practice areas presented in Figure 1 readily translate to core standards and the components of the three practice areas contribute to development of competencies for these standards. A major strength in the reliability of these standards and their competencies is that they were developed from a range of data sources. Initially the standards were developed from the components in the core role and then supported and refined through information from the literature and other data sources (for example, NSW Health Department, 1995; Read, 2001; ACT Government, 2002)

The assumptions informing the development and use of this competency framework are as follows.

Assumptions

1. The nurse practitioner is a registered nurse whose practice must first meet the following regulatory and professional requirements for Australia and New Zealand and then demonstrate the additional requirements of the nurse practitioner:

- National Competency Standards for the Registered Nurse
- Code of Ethics for Nurses

- Code of Professional Conduct for Nurses.

These assumed requirements serve as the foundation for the nurse practitioner competency framework and are not repeated in the framework.

2. The Nurse Practitioner Standards build upon the extant advanced practice competency standards that are used in Australia and those used in New Zealand. These founding standards are not repeated in the nurse practitioner framework.

3. The Nurse Practitioner Standards are core standards that are common to all models of nurse practitioner practice. They can accommodate specialty competencies that are designed to meet the unique health-care needs of specific client/patient populations.

Nurse Practitioner Competency Framework

The competency framework has three Standards, each Standard has a number of competencies and each competency has a list of measurable or demonstrable performance indicators. These standards and the competency framework provide a clear, meaningful and logical foundation to inform nurse practitioner practice, regulation and education.

Standard 1

Dynamic practice that incorporates application of high-level knowledge and skills in extended practice across stable, unpredictable and complex situations.

This standard sets an expectation that the nurse practitioner draws upon specialist expertise for practice in a range of contexts and demonstrates a readiness to maintain and update this clinical expertise. Whilst the standards and competencies are generic, the four competencies that define the expected skills and knowledge for Standard 1 can also potentially provide a framework for

specialty practice. That is, the indicators for the competencies in this standard can be reframed from generic to specialist language to specify the skill and knowledge attributes that define a specific extended specialist practice. These findings support work conducted on Accident and Emergency nurse practitioner curricula (Orzel, 1998). In the absence of national practice standards Orzel synthesised work conducted on practice characteristics of advanced practice nurses (Stilwell and Scott, in Orzel, 1998) and occupational function of the nurse practitioner (Hicks and Hennessy, 1998), and proposed a generic curriculum based on flexible standards. The content areas in this curriculum are consistent with the competencies in Table 1.

Specialist attributes have been referred to in the literature as the 'X factor' (Cattini and Knowles, 1999). According to these authors the 'X factor' is a combination of higher level of clinical decision making, flexibility, problem solving and change management that characterise the dynamic nature of specialist practice. Whilst the authors were relating this quality to clinical nurse specialist competencies, the notion of the 'X factor' is useful in applying specialist attributes within the generic nurse practitioner competency framework of Standard 1.

Table 1: Nurse practitioner Competencies and performance indicators for Standard 1

Standard 1 – Competencies	
1.1	Conducts advanced, comprehensive and holistic health assessment relevant to a specialist field of nursing practice *Performance indicators* a. Demonstrates advanced knowledge of human sciences and extended skills in diagnostic reasoning b. Differentiates between normal, variation of normal and abnormal findings in clinical assessment c. Rapidly assesses a patient's unstable and complex health-care problem through synthesis and prioritisation of historical and available data d. Makes decisions about use of investigative options that are judicious, patient-focused and informed by clinical findings e. Demonstrates confidence in own ability to synthesise and interpret assessment information including client/patient history, physical findings and diagnostic data to identify normal and abnormal states of health and differential diagnoses f. Makes informed and autonomous decisions about preventive, diagnostic and therapeutic responses and interventions that are based on clinical judgment, scientific evidence, and patient-determined outcomes
1.2	Demonstrates a high level of confidence and clinical proficiency in carrying out a range of procedures, treatments and interventions that are evidence based and informed by specialist knowledge.

Performance indicators

a. Consistently demonstrates a thoughtful and innovative approach to effective clinical management planning in collaboration with the patient/client

b. Exhibits a comprehensive knowledge of pharmacology and pharmacokinetics related to a specific field of clinical practice

c. Selects/prescribes appropriate medication, including dosage, routes and frequency pattern, based upon accurate knowledge of patient characteristics and concurrent therapies

d. Is knowledgeable and creative in selection and integration of both pharmacological and non-pharmacological treatment interventions into the management plan in consultation with the patient/client

e. Rapidly and continuously evaluates the patient/client/'s condition and response to therapy and modifies the management plan when necessary to achieve desired patient/client outcomes

f. Is an expert clinician in the use of therapeutic interventions specific to, and based upon, their expert knowledge of specialty practice

g. Collaborates effectively with other health professionals and agencies and makes and accepts referrals as appropriate to specific model of practice

h. Evaluates treatment/intervention regimes on completion of the episode of care, in accordance with patient/client-determined outcomes

1.3 Has the capacity to use the knowledge and skills of extended practice competencies in complex and unfamiliar environments

Performance indicators

a. Actively engages community/public health assessment information to inform interventions, referrals and coordination of care

b. Demonstrates confidence and self-efficacy in accommodating uncertainty and managing risk in complex patient care situations

c. Demonstrates professional integrity, probity and ethical conduct in response to industry marketing strategies when prescribing drugs and other products.

d. Uses critical judgment to vary practice according to contextual and cultural influences

e. Confidently integrates scientific knowledge and expert judgment to assess and intervene to assist the person in complex and unpredictable situations

1.4 Demonstrates skills in accessing established and evolving knowledge in clinical and social sciences, and the application of this knowledge to patient care and the education of others.

Performance indicators

a. Critically appraises and integrates relevant research findings in decision making about health-care management and patient interventions

b. Demonstrates the capacity to conduct research/quality audits as deemed necessary in the practice environment

c. Demonstrates an open-minded and analytical approach to acquiring new knowledge

d. Demonstrates the skills and values of lifelong learning and relates this to the demands of extended clinical practice

Standard 2

Professional efficacy whereby practice is structured in a nursing model and enhanced by autonomy and accountability

This standard determines that nurse practitioner practice is sustained by a commitment and fidelity to the primacy of a nursing model of practice. Our findings indicated that within this model of practice the nurse practitioner demonstrates the ability and confidence to apply extended practice competencies within a scope of practice that is autonomous and collaborative. Our findings support and are supported by previous research on the importance of autonomous practice for the nurse practitioner (Cullen, 2000; Cole and Ramirez, 2000; Marsden et al. 2003; Brown and Draye, 2003). In a Delphi study with 24 expert stakeholders in nurse practitioner practice Marsden et al (2003) found autonomy to be an important factor in the nurse practitioner role that was not only necessary for practice but also engendered effective risk management. Table 2 lists the competencies and performance indicators for this standard.

Table2: Nurse practitioner Competencies and performance indicators for Standard 2

Standard 2 – Competencies	
2.1	Applies extended practice competencies within a nursing model of practice *Performance indicators* a. Readily identifies the values intrinsic to nursing that inform nurse practitioner practice and an holistic approach to patient/client/community care b. Communicates a calm, confident and knowing approach to patient care that brings comfort and emotional support to the client and their family c. Demonstrates the ability and confidence to apply extended practice competencies within a scope of practice that is autonomous and collaborative d. Creates a climate that supports mutual engagement and establishes partnerships with patients/carer/family e. Readily articulates a coherent and clearly defined nurse practitioner scope of practice that is characterised by extensions and parameters
2.2	Establishes therapeutic links with the patient/client/ community that recognise and respect cultural identity and lifestyle choices *Performance indicators* a. Demonstrates respect for the rights of people to determine their own journey through a health/illness episode while ensuring access to accurate and appropriately interpreted information on which to base decisions b. Demonstrates cultural competence by incorporating cultural beliefs and practices into all interactions and plans for direct and referred care c. Demonstrates respect for differences in cultural and social responses to health and illness and incorporates

2.3	health beliefs of the individual/community into treatment and management modalities Is proactive in conducting clinical service that is enhanced and extended by autonomous and accountable practice *Performance indicators* a. Establishes effective, collegial relationships with other health professionals that reflect confidence in the contribution that nursing makes to client outcomes b. Readily uses creative solutions and processes to meet patient/client /community defined health-care outcomes within a frame of autonomous practice c. Demonstrates accountability in considering access, clinical efficacy and quality when making patient-care decisions d. Incorporates the impact of the nurse practitioner service within local and national jurisdictions into the scope of practice e. Advocates for expansion to the nurse practitioner model of service that will improve access to quality, cost-effective health care for specific populations

Standards 3:

Clinical leadership that influences and progresses clinical care, policy and collaboration through all levels of health service

This standard recognises the need for the nurse practitioner to be a clinical leader with the ability to promote the professional role and the service needs of their client base in clinical, political and professional forums. Our findings in this area are less robust than in the previous two practice standards. This may be related to the newness of the role of nurse practitioner and the relative lack of experience, particularly as it relates to this level of clinical leadership, in the role of the research participants. However, whilst the data on leadership practice are limited in this study there was a firm commitment from the participants' narratives to their role as leaders in both the clinical and the systems level of health service (Gardner et al. 2004).

One important manifestation of this leadership role was the way these participants saw themselves as pioneers. The nurse practitioner role in Australia and New Zealand is in its infancy. Many of the clinicians in this study were required to establish their positions in environments that were ill-prepared and at times hostile. The competencies that were utilised

to establish these roles included advocating for their client population, lobbying administrators and other activities that we have categorised as leadership. Our interpretation is supported by a study that was conducted with 50 nurse practitioners in North America who pioneered establishment of nurse practitioner roles during 1965-1979 (Brown and Draye, 2003). The findings from this grounded theory study were summarised as 'a commitment to advanced autonomy to make a difference to the quality of patient care'. The reported experiences of the participants in this study resonate with those of the participants in our study. The competencies for this standard are described in Table 3.

Table3: Nurse practitioner Competencies and performance indicators for Standard 3

Standard 3 - Competencies	
3.1	Engages in and leads clinical collaboration that optimise outcomes for Patients/clients/communities *Performance indicators* a. Actively participates as a senior member and/or leader of relevant multidisciplinary teams b. Establishes effective communication strategies that promote positive multidisciplinary clinical partnerships c. Articulates and promotes the nurse practitioner role in clinical, political and professional contexts d. Monitors their own practice as well as participating in intra- and inter-disciplinary peer supervision and review
3.2	Engages in and leads informed critique and influence at the systems level of health-care *Performance indicators* a. Critiques the implication of emerging health policy on the nurse practitioner role and the client population b. Evaluates the impact of social factors (such as literacy, poverty, domestic violence and racial attitudes) on the health of individuals and communities and acts to moderate the influence of these factors on the specific population/individual c. Maintains current knowledge of financing of the health-care system as it affects delivery of care d. Influences health-care policy and practice through leadership and active participation in workplace and professional organisations and at state and national government levels e. Actively contributes to and advocates for the development of specialist, local and national, health-service policy that enhances nurse practitioner practice and the health of the community

Conclusion

The collaboration between Australia and New Zealand on the Nurse Practitioner Standards Project has achieved important outcomes to inform mutual recognition of the nurse

practitioner role across the eight jurisdictions that regulate nurse practitioner preparation and practice across these two countries. Our research findings include the development of competencies that define the expectations of nurse practitioner practice across three Standards. These Standards include clinical, professional and leadership roles that form the structure of nurse practitioner practice.

The research also identified attributes that qualitatively differentiate the practice of the nurse practitioner from other nursing roles. These attributes conform to the notion of capability. This is the ability to use non-linear reasoning and draw upon creative solutions in dealing with the complexity of this level and type of health care practice. These attributes are strongly represented in the description and characteristics of the core role of the nurse practitioner and are in partnership with the above competency framework. This analysis is tentative and further research is required to test the fit of capability with nurse practitioner standards.

The completion of this research project to develop generic standards for nurse practitioners in Australia and New Zealand is a beginning. The introduction of these competencies needs to be staged using an extensive dissemination and feedback strategy. Following implementation there needs to be a comprehensive evaluation using a rigorous methodology incorporating wide-ranging consultation with stakeholders including consumers, employers and the other members of the multidisciplinary health-care team as well as the nurse practitioners themselves and those who educate and accredit them. Finally, in addition to establishing a research informed basis for regulation, education, and practice at national level this study has contributed to the global debate on nurse practitioner competencies.

References

ACT Government., 2002. The ACT nurse practitioner report: final report of the steering committee. Canberra.

American Nurses Association., 2002. Advanced practice nursing: A new age in health-care.

Australian Nursing Federation., 1997. Competency standards for the advanced nurse. Melbourne.

Brown, M., Draye, M., 2003. Experiences of pioneer nurse practitioners in establishing advanced practice roles. Journal of Nursing Scholarship. 35(4), 391-7.

Brown, S. A., Grimes, D.E., 1995. A meta-analysis of nurse practitioners and nurse midwives in primary care. Nursing Research 44 (6), 332-339.

Cairns, L., 1997. The capability learning model. 3rd annual Australian Capability Network, Sydney.

Carroll, M., 2002. Advanced nursing practice. Nursing Standard 16 (29), 33-35.

Cattini, P., Knowles, V., 1999. Core competencies for clinical nurse specialists: a useable framework. Journal of Clinical Nursing. 8 (5), 505-11.

Cole, F L., Ramirez, E., 2000. Nurse practitioner autonomy in a clinical setting *Emergency Nurse;* Feb 2000, 7, 9; Career and Technical Education. p. 26

Cullen, C., 2000. Autonomy and the nurse practitioner. Nurse Standards, 2000 Feb 9-15; 14 (21), 53-6.

Donald, F. C., McCurdy, C., 2002. Review: nurse practitioner primary care improves patient satisfaction and quality of care with no difference in health outcomes. Evidenced Based Nursing 5(October), 121.

Gardner, A., Gardner, G., 2005. A trial of nurse practitioner scope of practice. Journal of Advanced Nursing 49 (2), 135-145.

Gardner, G., Carryer, J., Dunn, S., Gardner, A. 2004. The Nurse Practitioner Standards Project: Report to the Australian Nursing and Midwifery Council . ANMC November

Girot, E., 2000. Assessment of graduates and diplomates in practice in the UK - are we measuring the same level of competence? Journal of Clinical Nursing 9, 330-337.

Hase, S., 2000. Measuring organisational capability: beyond competence. Future Research, Research Futures: the 3rd Australian VET Research Association Conference, Canberra

Hase, S., Kenyon, C., 2000. From andragogy to heutagogy. UltiBASE

Hicks, C., Hennessy, D.,1998. A Triangulation approach to the identification of acute sector nurses' training needs for formal nurse practitioner status. Journal of Advanced Nursing. 27 (1), 117-31.

Horrocks, S. E., Anderson, E., Salisbury, C., 2002. Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. British Medical Journal 324 (6 April), 819-823.

Keating, P.,1994. Working Nation. Canberra, Australian Government Publishing Service

Kinnersley, P., Anderson, E., Parry, K., Clement, J., Archard, L., Turton, P., Stainthorpe, A., Fraser, A., Butler, C., Rogers, C., 2000. Randomised controlled trial of nurse practitioner versus general practitioner care for patients requesting 'same day' consultations in primary care. British Medical Journal 320, 1043-1048.

Marsden, J., Dolan, B., Holt, L., 2003. Nurse practitioner practice and deployment: electronic mail Delphi study. Journal of Advanced Nursing 43 (6), 595-605.

NSW Health Department., 1995. Nurse practitioner project (stage three). Final report of the steering committee. Sydney, NSW Health Department

Nursing Council of New Zealand., 2001. The Nurse Practitioner. Nursing Council of New Zealand, Wellington.

Orzel, M., 1998. A collaborative generic curriculum development to support practitioners functioning within enhanced roles. Accident & Emergency Nursing. 6 (3), 149-54.

Pearson, A., Peels, S., 2002. The nurse practitioner. International Journal of Nursing Practice 8 (4), S5-S9.

Read, S., 2001. Exploring new roles in practice (ENRip). Final report. 2003

Royal College of Nursing Australia., 2000. Position statement: advanced practice nursing.

Sakr, M., Angus, J., Perrin, J., Nixon, C., Nicholl, J., Wardrop, J., 1999. Care of minor injuries by emergency nurse practitioners or junior doctors: a randomised controlled trial. The Lancet 354 (October 16), 1321-1326.

Stephenson, J., Weil, S., 1992. Quality in learning: A capability approach in higher education. London, Kogan Page

Stilwell, B., Scott, C., in Orzel, M., 1998. A collaborative generic curriculum development to support practitioners functioning within enhanced roles. Accident & Emergency Nursing. 6 (3), 149-54.

Sutton, F., Arbon, P., 1994. Australian nursing - moving forward? Competencies and the nursing profession. Nurse Education Today 14, 388-93.

UKCC., 1999. Fitness for Practice. UKCC, London.

Venning, P., Durie, A., Roland, M., Roberts, C., Leeses, B., 2000. Randomised control trial comparing cost effectiveness of general practitioners and nurse practitioners in primary care. British Medical Journal 320 (7241), 1048-1053.

Watkins MJ 2000 Competency for nursing practice. Journal of Clinical Nursing 9 (3), 338-346

Watson, R., Simpson, A., Topping, A., Porock, D., 2002. Clinical competence assessment in nursing: a systematic review of the literature. Journal of Advanced Nursing 39 (5), 421-431.

Winter, R., Maisch, M., 1996. Professional competence and higher education: the Asses programme. Falmer Press, London.