

## COVER SHEET

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**Title:** Competency and capability: imperative for nurse practitioner education

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## **Abstract**

**Objective** The objective of this study was to conduct research to inform the development of standards for nurse practitioner education in Australia and New Zealand and to contribute to the international debate on nurse practitioner practice.

**Setting** The research was conducted in all states of Australia where the nurse practitioner is authorised and in New Zealand

**Subjects** The research was informed by multiple data sources including nurse practitioner program curriculae documents from all relevant universities in Australia and New Zealand, interviews with academic convenors of these programs and interviews with nurse practitioners.

**Primary argument** Findings from this research include support for masters level of education as preparation for the nurse practitioner. These programs need to have a strong clinical learning component and in-depth education for the sciences of specialty practice. Additionally an important aspect of education for the nurse practitioner is the centrality of student directed and flexible learning models. This approach is well supported by the literature on capability.

**Conclusions** There is agreement in the literature about the lack of consistent standards in nurse practitioner practice, education and nomenclature. The findings from this research contribute to the international debate in this area and bring research informed standards to nurse practitioner education in Australia and New Zealand.

**Key words:** nurse practitioner education, competencies, capability, advanced practice nurse education

## **Introduction**

The nurse practitioner is a new and unique level of health-care provider in Australia and New Zealand. The title, nurse practitioner, is now legally protected in New Zealand and in most Australian states and there is mutual recognition of registration between the two countries.

Whilst this mutual recognition of registration has been in effect for several decades there has been no standardisation of education, practice competencies and authorisation process relating to nurse practitioner within the different jurisdictions in Australia or between Australia and New Zealand. To address this anomaly the Australian Nursing and Midwifery Council (ANMC) and Nursing Council New Zealand formally committed to collaborative development of the nurse practitioner role under a Memorandum of Cooperation and jointly commissioned a study to develop research based standards for nurse practitioner practice competencies and education. The research reported here, is the findings from this study related to educational standards for the nurse practitioner.

## **Background**

Health care reform is on the agenda of most developed countries including the USA (Lancaster et al 2000), UK (Charlton and Andras 2005), Australia (Duckett 2002) and New Zealand (Ministry of Health 2001). Also in these countries nurse practitioners are playing a vital role in reforming health care through improved access (O'Keefe and Gardner 2003), cost effective care (Burl et al 1998), quality of care and improved patient satisfaction (Gardner and Gardner 2005). Additionally, studies have demonstrated that the nurse practitioner enhances team approaches to health care delivery (Litaker et al 2003).

The nurse practitioner role first originated in North America in the 1960s, and the UK in 1980s. The impetus for implementation was related to the prevailing inequitable distribution of health care often attributed to a shortage of doctors and in response to the need to reduce junior doctors' hours; cost containment in health service provision, and the need to provide improved access to health-care services (Horrocks et al 2002; Harris and Redshaw 1998).

This burgeoning of the nurse practitioner role in North America and the UK in response to community needs has been echoed in Australia and New Zealand over the past decade. Nurse practitioners have been formally practicing in some jurisdictions in Australia since 1999 and in New Zealand since 2001.

Despite, and possibly related to, the rapid adoption and ongoing development of the nurse practitioner role internationally, there is little research related to educational standards for the nurse practitioner. This paper reports on the educational aspect of the findings from the ANMC Nurse Practitioner Standards Project (Gardner et al 2004a).

## **Method**

The overall aim of the study was to investigate nurse practitioner education and practice in Australia and New Zealand and to draw upon this information in combination with relevant literature to develop core practice competencies and educational standards that could be applied in both countries.

The research design incorporated a multi-methods approach with a range of data collection tools and data sources including current policy documents, nurse practitioner program

curricula, and interviews with academics and clinicians. Data were collected from relevant sources in Australia and New Zealand.

#### *Participant sample and recruitment processes*

A population sample of authorised and practising nurse practitioners, and the academic convenors from all nurse practitioner programs being offered in Australia and New Zealand during 2004 was used.

*Nurse practitioners* in New Zealand and relevant states in Australia were invited to participate in the study. Through the nursing regulatory authority in each jurisdiction, nurse practitioners were contacted and invited to respond to one of the investigators if they were interested in participating in an interview.

*Academic convenors* of all nurse practitioner education programs were identified through expert networks in Australia and New Zealand and searching university school of nursing web pages. Programs under development were excluded. The academics were contacted by one of the investigators, supplied with an information document and consent form and invited to participate. Their participation involved submission of their nurse practitioner curriculum document and participation in a follow-up structured telephone interview.

### **Data collection**

#### *Nurse practitioner education*

The curricula documents on all nurse practitioner education programs in Australia and New Zealand were collected by one of the investigators who was not involved in nurse practitioner education at the time of the research. A data abstraction tool to standardise the information from these documents was developed and tested (Table 1). In addition, semi-structured interviews with academic program convenors were conducted by this investigator.

**Table: 1 Data Abstraction Tool – Nurse Practitioner Curricula**

<b>1. Program Characteristics</b>					
1.1 Name of University	1.2 Title of program	1.3 Entry requirements	1.4 Level of award	1.5 Entry and exit points (if multiple)	1.6 Duration of Program F/T semesters
1.7 Generalist or specialist NP program:      Yes      No      If yes, list specialities offered:					
<b>2. Program management</b>					
2.1 Nrs Reg Authority accredited Yes / No		2.2 Membership categories for curriculum committee		2.3 Membership categories for Program advisory committee	
Standards included?      Yes      No					
<b>3. Conceptual curriculum</b>					
3.1 Explicit assumptions informing content		3.2 Explicit assumptions informing process		3.3 Graduate profile	
<b>4. Program delivery</b>					
4.1 Study mode	4.2 Credentials of program convenor	4.3 Description of people involved in delivery		4.4 Teaching learning process	
<b>5. Program evaluation</b>					
List processes to be adopted for ongoing monitoring of the course					
<b>6. Program content</b>					
6.1 Aims and objectives	6.2 Employment requirements for entry to course	6.3 Clinical / field learning requirements		6.4 List course titles with brief description. Link to competencies if explicit.	
<b>7. Student assessment</b>					
7.1 List clinical assessment strategies (link to course/s)		7.2 List non field based assessment strategies (link to course/s)		7.3 Is assessment explicitly linked to competencies? If yes list competencies	

**Note:** *Program:* Refers to the total education experience leading to the qualification, also called a Course in some universities. *Course* is an individual unit of study. Several courses make up a program. Also called a ‘subject’ or ‘unit’ in some universities.

### *Nurse practitioners*

Telephone interviews were conducted with consenting nurse practitioners in New Zealand and relevant jurisdictions in Australia. The in-depth interviews collected text data on the experiential dimensions of nurse practitioner work and their perceptions of requisite preparation for the role.

### **Data analysis**

#### *Nurse practitioner curricula*

The data from all program curricula documents were collated and analysed for patterns in relation to program characteristics, teaching and learning process and program content. Data

from nurse academic interviews were matched to these fields to strengthen and confirm or qualify the abstracted curricula data.

#### *Nurse practitioner interviews*

The data from nurse practitioner interviews were analysed according to the standard for qualitative data. An inductive process was used to order the data according to identified themes within each interview. These themes were then collated according to identified conceptual categories. A final read cross-checked all interviews for the identified categories.

Ethical approval for the study was secured from relevant University Human Research Ethics Committees. Informed consent was obtained from all participants. Specific assurances were given to universities, and observed by the research team, regarding commercial-in-confidence issues.

## **FINDINGS**

This data collection was conducted in 2004 and the findings reported here reflect the state of nurse practitioner education in Australia and New Zealand at that time.

Fourteen program curricula comprising five from New Zealand and nine from Australian universities were included in the study. This represents 100 per cent of nurse practitioner programs offered throughout the two countries in 2004. Interviews were conducted with 12 academic convenors. While all universities sent their curricula documents for inclusion in the study, convenors from two of these universities did not follow up requests to participate in interview.



Data have been aggregated and reporting is in the form of trends and patterns. The findings from analysis of nurse practitioner interviews are integrated in each of the areas.

## **Program Characteristics**

### *Level and duration of award*

Thirteen of these programs leading to the award of a nurse practitioner qualification were masters' degrees. Of the masters degree programs, six programs were four semesters in length and seven were three semesters (equivalent full time). Academic convenors all agreed that the master's degree was an appropriate standard for nurse practitioner education.

In interviews with nurse practitioners, participants were asked their view on the level of education necessary for nurse practitioner training. Most suggested master's degree and their reasoning related to:

- Public perception of the level and stature of a master's degree as an important aspect of ensuring public confidence in nurse practitioner service
- A belief that the master's degree offers scholarship that is comparable with the nature of the skills, knowledge and attributes required
- Personal experience of the value of that level of education.

In some instances nurse practitioners provided support for this view based on their own experiences as pioneers while others offered a perspective influenced by having come to the nurse practitioner role through a different route. Nurse practitioners who did not have a masters' degree tended to take a more qualified stance and were overwhelmingly committed to the primacy of clinical experience as preparation for the nurse practitioner role.

### *Entry requirements*

Entry requirements across the 14 programs were highly consistent, with the main variation being in requirements for experience in the specialty. This varied from none to five years. Nine of the programs required postgraduate training/qualifications in the specialty field and most of these were integrated into the master's degree. In terms of miscellaneous requirements, two required a completed portfolio for entry to the program and two required membership of professional/specialty association. Ten of the 14 programs had flexible entry and exit features.

### *Scope of the programs*

Three of these programs were focused on one specific specialty and six offered a range of structured specialty studies. Five universities offered programs with generic subjects and a framework or assessment mechanisms to obtain advanced/extended education in the candidates' own specialty. In interviews with academics this latter model was described as a necessary approach to nurse practitioner education to facilitate the development of skills and knowledge in new fields of extended nursing practice.

### **Approaches to teaching and learning**

In forming the basis for education process certain assumptions were common across all curricula. These related to the importance of:

- Adult learning principles
- Learning as collaborative
- Use of the clinical field with clinical mentor/preceptor
- Use of experiential/situated learning

- Promoting self-directed/lifelong learning skills

Additionally, all academics interviewed were committed to the clinical environment as a context for nurse practitioner education.

Data from the nurse practitioner interviews also strongly supported the centrality of clinical learning as preparation for the nurse practitioner role. For some, there was a dichotomy. Clinical experience was viewed as different from and better than, the (perceived) alternative academic orientation of a masters' degree.

Others were wary of the quality of the clinical content in master degree programs. Participants in both countries who were very recent graduates of an approved master degree expressed concern at the adequacy of the clinical content. They were especially concerned for students who would come to the degree without the level of clinical experience which had informed their own student experience. Consequently, these nurse practitioners were adamant that the clinical rigour of the master's degree must be developed and maintained while not losing the special qualities of masters' degree education.

### **Curricula content**

Findings from this study indicate that the prevailing professional and regulatory environment in Australia, in which nurse practitioner programs of education were designed, was diverse, with scant attention to national priorities and cross-border collaboration. The situation in New Zealand is more cohesive due largely to the centralised nature of nursing regulation. The trans-Tasman context therefore is also diverse. Hence the content imperatives for nurse practitioner education have been determined locally and in response to local regulatory requirements and the attitudes and opinions of each health service or clinical environment.

Accordingly, one of the questions in the interviews with academics related to the factors that influenced the program content. The responses were varied. In one program the content was designed from empirical curriculum research conducted during the nurse practitioner trial in their jurisdiction. For the remainder, content was determined through consultation with clinical specialists, specialty competencies when available, advisory committees, medical practitioners and the academics' own vision for the nurse practitioner role. Additionally many were influenced by publications from North America and United Kingdom.

In many of the programs the nurse practitioner stream was embedded in a general nursing master degree. Hence it was at times difficult to determine the content/courses that were specifically designed for nurse practitioner education.

Twelve of the programs required or preferred the candidates to be currently employed in their specialty field. The same pattern applied to the requirements for clinical subjects and internships where practice learning was supported by a clinical team, clinical preceptor or mentor. For many of these courses the clinical learning support was provided by medical practitioners and other health-care professionals.

Across all programs there was a pattern relating to the specific nurse practitioner content. These data have been categorised into three areas namely universal content, frequent content and specialty content.

#### Universal content

Three study areas were contained in all 14 programs. These were:

- Pharmacology. In many programs the study of pharmacology and pharmacotherapeutics was iterative in that this content was spread in several courses across the curriculum.
- Research with or without a focus on evidence-based practice. Research training, while present in all programs, varied in terms of scope. Some required candidates to conduct a small research project or practice audit while other programs contained research and/or evidence-based practice courses without empirical study requirements.
- Assessment and diagnosis, including imaging and laboratory diagnostics. This area of study was a major feature in all programs. While course titles varied there was a consistent commitment to content related to advanced and extended assessment and diagnostic skills.

#### Frequent content

Other study areas that were common across many of the programs included:

- Clinical sciences (anatomy and physiology, pathophysiology)
- Nursing professional and scope of practice studies
- Clinical leadership
- Society, law and ethics and
- Studies in cultural awareness and cultural aspects of nurse practitioner practice.

Content such as symptom management and therapeutics was listed in some programs, however these areas of study tended to be linked to specialty streams.

#### Specialty content

Specialty content was apparent in two forms: those programs that had designated specialty focus or streams (N=9) and those programs with a generalist core component and framework

for specialty study (N=5). The pattern of specialty education varied. In some, content in the specialty streams focused on specialist assessment and therapeutics that, in some cases, were guided by the competencies for that specialty. Other programs located specialty education in the clinical practicum component. The remainder required the candidate to enter with a graduate diploma in a specialty field. Those programs with frameworks for specialty study worked from learning contracts and/or clinical practicum with dedicated preceptors/mentors or a clinical team for specialty learning.

Interviews with nurse practitioners included questions related to content areas for nurse practitioner education. Advanced assessment and pharmacology received top rating which was consistent with the curricula data. Content related to pathophysiology, health systems, with policy and political issues also receiving frequent mention. Legal issues, and research skills and utilisation were noted as important.

### **Analysis of nurse practitioner narratives – other issues**

The participants spoke strongly of what is described as lifelong learning, captured in the comment of one participant: *‘as you go along you learn what you need to know’*. Several spoke of the difficulty in valuing one particular style of learning over another, describing all education as valuable and some noting that their appreciation for education expanded as their sense of the role developed. All participants in different ways spoke of the necessary complexity of educational preparation. They emphasised the requirement for specific clinical knowledge and skills and also the requirement for learning how to learn and developing confidence in their ability to practice in an unpredictable and dynamic clinical, professional and political context. Consistently the data spoke to the need for a nursing model as the core tenet in preparation for nurse practitioner practice. The political vulnerability of these nurses in many settings validates their need for a range of skills to ensure their professional safety.

## **DISCUSSION**

### **Preparation for practice**

Analysis of the nurse practitioner interview data supports masters' degree level of education as preparation for the role. This was justified on two levels. First the findings supported the need for strong educational preparation in order to meet the demands of the role. The second level was related to credibility with the community and other health disciplines as to the preparedness of these clinicians, best achieved by a master's degree for entry to practice. These findings are supported by the international literature where there is a strong trend to recommending master degree programs for advanced practice and, therefore, nurse practitioner education (Fowkes et al 1994; American Academy of Nurse Practitioners 1995; Davidson 1996; de Leon-Demare et al 1999; Aktkins and Ersser 2000; van Soeren et al 2000).

Specialisation is an important issue in nurse practitioner education and analysis of the curricula data identified two approaches used to deliver specialty studies. These approaches included *a)* structured specialty streams or programs and *b)* generic frameworks that could accommodate a student's chosen specialty field of study. While some of the specialty streams and programs were informed by specialty competencies e.g.(Council of Remote Area Nurses of Australia Inc. 2001) others relied on generic advanced practice competencies.

The findings also support the need for a significant clinical learning component in nurse practitioner education. Nurse practitioner participants universally endorsed the centrality of the clinical environment to nurse practitioner education. There was also universal support from the academics interviewed for clinical learning to be a major component of the programs. A related issue on nurse practitioner education that was strongly supported by both clinicians and

academics was the importance of student-directed learning. These findings are supported by research (Gardner et al 2004b) which reported the critical role played by the clinical environment in nurse practitioner training and the preference of nurse practitioner candidate participants for student-determined learning content and process.

In looking to educational theory that met the joint imperatives of student directed learning and contextual learning we found that the literature on capability (Hase and Davis 1999; Stephenson and Weil 1992) provided an important theoretical framework to inform curriculum development for nurse practitioner education. A capability approach to the learning process incorporates the flexibility to respond to the specific, self-identified learning needs of students (Phelps et al 2001).

Capable practitioners are those who know how to learn, are creative, have a high degree of self efficacy, can apply competencies in novel and familiar situations and work well with others (Hase and Davis 1999). Furthermore, capability emphasises the role of complexity in influencing the learning context whereby dynamic systems provide the environment for non-linear and unpredictable events (Hase 2000; Phelps et al 2001). The clinical environment of health care therefore is a fitting milieu for the basis of nurse practitioner education, and student-identified needs as an appropriate learning process.

### **Lack of standardisation**

Apart from these areas of agreement, the findings relating to nurse practitioner education indicate that a variety of standards, competency frameworks and interpretations of the role of the nurse practitioner have informed curricula development and accreditation approaches. There is also variability in educational levels for nurse practitioner education and a lack of consistency in the conceptual basis of these programs. Content varies across the programs with just three study areas of pharmacology, research, and advanced assessment, being common to



all. One of the particularly inconsistent factors in the nurse practitioner education programs across the states and between the two countries is the lack of clarity in terms of specific nurse practitioner, as distinct from advanced practice, study requirements. This is consistent with the literature on nurse practitioner education (Woods 1999) where there is confusion and ambiguity related to nomenclature and educational requirements for the nurse practitioner (Gardner et al 2004b).

### **Recommendations towards national/trans-Tasman standards for NP education**

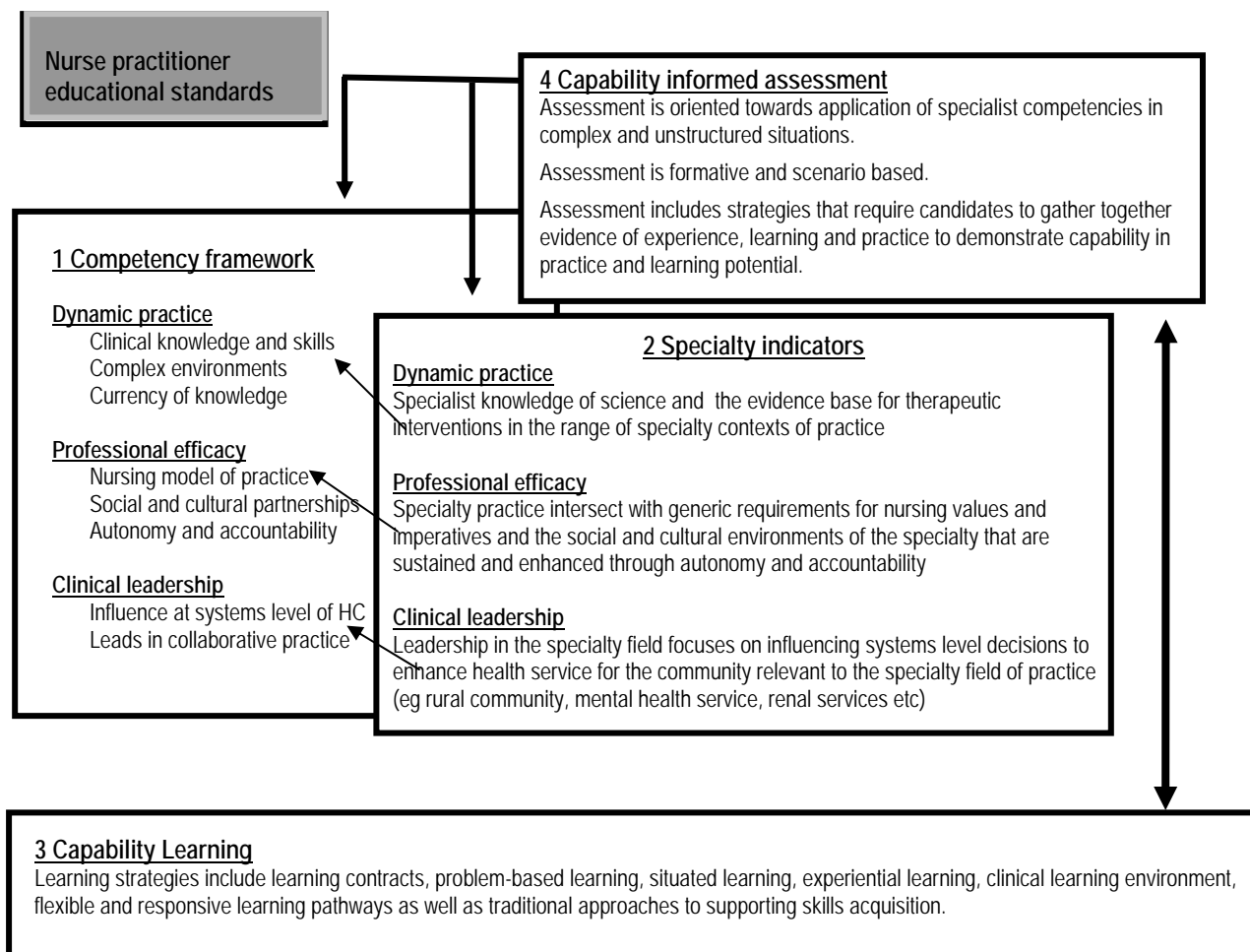
The findings from this research contribute to the international debate and also present an opportunity for Australia and New Zealand to take a global leadership role in adopting a standardised, research-informed approach to nurse practitioner education and nomenclature. The advantages for the Australian interstate and trans-Tasman context are significant.

This research has identified the need for a two-layered structure for nurse practitioner education. This includes i) the ANMC nurse practitioner competency framework that inherently describes the knowledge, attitudes and skills of extended practice (Gardner et al 2004a), and ii) the concept of capability, which defines the features of performance of these competencies that are, in combination, uniquely related to the *method* of nurse practitioner practice.

Nurse practitioner education programs that are structured to meet these Generic Standards will need to address not only the content requirements of a competency framework but most importantly the learning process and assessment requirements as determined by the imperatives of capability theory (Gardner et al 2004a; Stephenson and Weil 1992). This two

layered approach is illustrated in Figure 1. As Hase and Davis (1999) suggested, becoming capable requires different learning experiences from becoming competent. This thinking is also relevant for the specialty learning required in the extended practice context. Nurse practitioner candidates, as advanced specialist nurses are well placed to define and respond to their own specific learning needs. Structured pedagogical approaches to learning will be inadequate for the education of the nurse practitioner. Capability learning offers an alternative in the form of flexible learning pathways that allow for increasing complexity and curriculum scaffolding through a rich variety of learning resources, and mentored self-directed learning (Phelps et al 2001).

**Figure 1 Model for NP education**



The model in Figure 1 illustrates the configuration of all elements related to nurse practitioner education and the interface between the requirements for competency learning and assessment, and, the influences of capability theory on the learning environment for nurse practitioner education. The structure illustrates standards to support tertiary education providers in the development and delivery of nurse practitioner masters degree programs. Additionally the model provides an evidence informed benchmark that can be applied in the accreditation of courses leading to authorisation as a nurse practitioner across all regulatory jurisdictions in Australia and New Zealand.

## REFERENCES

- Atkins, S., and Ersser, S. 2000. Education for Advanced nursing practice: and evolving framework. *International Journal of Nursing Studies* 37:523-533.
- American Academy of Nurse Practitioners. 1995. *Position statement on nurse practitioner curriculum*.
- Burl, J.B., Bonner, A., Rao, M., and Khan, A. 1998. Geriatric Nurse Practitioners in Long - Term Care: Demonstration of Effectiveness in Managed Care. *Journal of the American Geriatrics Society* 46 (4):506 - 510.
- Charlton, B. G., and Andras, P. 2005. Modernising UK health services: 'short-sharp-shock' reform, the NHS subsistence economy, and the spectre of health care famine. *Journal of Evaluation in Clinical Practice* 11 (2):111 - 119.
- Council of Remote Area Nurses of Australia Inc. 2001. *National Remote Area Nurse Competencies*. Armidale: The Centre for Research in Aboriginal and Multicultural Studies (CRAMS).
- Davidson, C. 1996. The need for a standardized core curriculum. *Nurse Practitioner* 21 (4):155-156.
- de Leon-Demare, K., Chalmers, k., and Askin, D. 1999. Advanced practice nursing in Canada: has the time really come? *Nursing Standards* 14 (7):49-54.
- Duckett, S.J. 2002. The 2003 - 2008 Australian Health Care Agreements: an opportunity for reform. *Australian Health Review* 25 (6):24 - 26.
- Fowkes, K., Gamel, N., Wilson, S., and Garcia, R. 1994. Effectiveness of educational strategies preparing physicians assistants, nurse practitioners, and certified nurse-midwives for under serviced areas. *Public Health Reports* 109 (5):673-682.
- Gardner, A., and Gardner, G. 2005. A trial of nurse practitioner scope of practitioner scope of practice. *Journal of Advanced Nursing* 49 (2):135 - 145.
- Gardner G., Carryer J., Dunn S., Gardner A 2004a. Nurse Practitioner Standards Project: Report to the Australian Nursing & Midwifery Council. Dickson ACT: ANMC.
- Gardner, G., Gardner, A. and Proctor M. 2004b. Nurse Practitioner education: a curriculum structure from Australian research. *Journal of Advanced Nursing* In press.
- Harris, A., and Redshaw, M. 1998. Professional issues facing nurse practitioners and nursing. *British Journal of Nursing* 7 (22):1381-1385.
- Hase, S and Davis, L. 1999. From competence to capability: the implications for human resource development and management. Paper read at Association of International Management, 17th Annual Conference, at San Diego.
- Hase, S. 2000. Measuring organisational capacity: beyond competence. Paper read at Future Research, Research Futures: the 3rd Australian VET Research Association Conference, at Canberra.
- Horrocks, S., Anderson, E., and Salisbury, C. 2002. Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. *British Medical Journal* 324:819-823.
- Lancaster, J., Lancater, W., and Onega, L.L. 2000. New Directions in Health - Care Reform. *Journal of Business Research* 48 (3):207-212.
- Litaker, D., Mion L.C., Planavasky, L., Kippes, C., Mehta, N. and Frolkis, J. 2003. Physician - nurse practitioner teams in chronic disease management: the impact on costs, clinical effectiveness, and patients' perception of care. *Journal of Interprofessional Care* 17 (3):223 - 37.
- Ministry of Health. 2001. *The Primary Health care Strategy*. Wellington: Ministry of Health, NZ.

- O'Keefe, E., and Gardner, G. 2003. Researching the sexual health nurse practitioner scope of practice: a blueprint for autonomy. *Australian Journal of Advanced Nursing* 21 (2):33 - 41.
- Phelps, R. Ellis A, and Hase, S. 2001. The role of metacognitive and reflective learning processes in developing capable computer users. Paper read at Meeting at the Crossroads:18th Annual Conference of the Australian Society for Computers in Learning in Tertiary Education, at Melbourne.
- Stephenson, J., and Weil, S. 1992. *Quality in learning: A capability approach in higher education*. London: Kogan Page.
- van Soeren, M., Andrusyszyn, M., Laschinger, D., Goldenberg, and DiCenso, A. 2000. Consortium approach for nurse practitioner education. *Journal of Advanced Nursing* 32 (4):825-833.
- Woods, L.P. 1999. The contingent nature of advanced nursing practice. *Journal of Advanced Nursing* 30 (1):121-128.