

# Development of a clinician-led research agenda for general practice nurses

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## KEY WORDS

General practice, practice nurse, research, research priorities.

## ABSTRACT

### Objective

This study sought to identify and prioritise research issues as perceived by Australian general practice nurses. In this context, a research priority refers to the most pressing research problems that necessitate exploration to improve clinical practice.

### Design

This paper reports the findings of a two-round Delphi study. Initially, focus groups identified research issues. Subsequently, an online survey facilitated ranking of these issues on a 5-point Likert scale.

### Setting

Australian general practices.

### Subjects

Twenty-five practice nurses participated in the focus groups and 145 practice nurses responded to an online survey.

### Main outcome measure(s)

The main outcome measure was the prioritisation of research issues by practice nurses.

### Results

The focus groups identified 53 research issues. These could be broadly classified as issues related to: (1) the practice nurse role and professional development; (2) general practice service delivery; and (3) disease prevention and health promotion. Survey data identified 34 priority areas from the 53 issues, that were considered important as indicated by a mean score greater than 4.0. These included 17 items related to disease prevention and health promotion, 12 items related to the practice nurse role and professional development and five items related to general practice service delivery.

### Conclusions

Issues identified in this study reflect current patterns of practice nurse workload. Emphasis needs to be placed on the translation and use of evidence by practice nurses, as well as the ways in which evidence can support and promote development of their role. The study findings highlight the need for research that is responsive to clinical demands.

## INTRODUCTION

Nurses have been employed in Australian general practices for many years. These practice nurses have the potential to provide leadership within the multidisciplinary primary care team as they offer services across the lifespan ranging from health promotion, childhood assessment and immunisation, to lifestyle modification and management of chronic and complex disease. However, it is not until relatively recently that their significant potential contribution to improving the standards of care and range of services available within general practice has been widely recognised (CDNM 2004). Increases in Federal Government funding for employment, education, professional support and the introduction of new item numbers to provide direct remuneration for practice nurse services has contributed to significant role development of practice nurses (Halcomb et al 2005).

Significant descriptive research has now been conducted in Australia to describe the roles of practice nurses (Halcomb et al 2005; Mills & Fitzgerald 2008; Patterson et al 1999a, 1999b; Patterson and McMurray 2003; Senior 2008; Watts et al 2004), their educational and training needs (Watts et al 2004; Meadley et al 2004) and consumer perceptions (Cheek et al 2002; Hegney, Price et al 2004; Hegney, Buikstra et al 2004). Preliminary work has also been conducted to explore the potential of expanding practice nurse roles in areas such as chronic disease management (Pilotto et al 2004; Halcomb et al 2004). This literature describes the complexity of issues related to general practice nursing, the significant impact of funding models on the general practice nurse's role and scope of practice, the lack of recognition of the general practice nurse's role amongst professional peers and consumers and the need for further well designed research that will provide an evidence base for the specialty.

In spite of its contribution to the body of knowledge, much of the research conducted to date has been driven by researcher interest and the focus on available funding, rather than strategic clinical

priority areas. Recently, a number of projects based on national health priorities have been funded. A national general practice nurse conference highlighted a desire by practice nurses to develop strategic partnerships with the tertiary sector to evaluate current models of care as well as to formally investigate the efficacy of current interventions. An understanding of nurses' research priorities is essential to ensure that clinically focussed; strategic research is undertaken that meets the needs of nurses, consumers' policymakers, and politicians. Such research will assist in developing an evidence base for practice nurses in addition to optimising the quality of care provided.

This study sought to identify and prioritise research issues as perceived by Australian general practice nurses. In this context, a research priority refers to the practice nurses' perceptions of the most pressing nursing research problems that necessitate exploration to improve clinical practice and patient care (Chang and Daly 1998). These data will facilitate the strategic development of recommendations for future research policy and priorities in terms of their clinical relevance (Chang and Daly 1998). Additionally, the results will potentially facilitate the allocation of limited human and financial resources to clinically relevant research programs that will optimise clinical practice and patient outcomes.

## METHODS

The role of involving clinical nurses in establishing research priorities is well documented in a range of nursing speciality groups (Annells et al 2005; Bäck-Pettersson et al 2008; Bell et al 1997; Chang and Daly 1998; Powell 2003). There are numerous methods of achieving consensus on research priority areas (Wortman et al 1998). Key considerations in the selection of the method for this study was the desire to achieve a nationwide consensus amongst a geographically dispersed group and be inclusive of the large number of relatively isolated general practice nurses (Watts et al 2004), whilst being mindful of the current research burden on potential participants.

A modified Delphi technique was used to generate and rank research issues of importance to the participants (Powell 2003). Researchers were conscious of the number of survey projects currently being undertaken with Australian practice nurses, therefore, modifications were made to the pure Delphi technique to reduce potential respondent burden and promote ownership of the project by the general practice nurses working in the clinical setting (Cohen et al 2004). These modifications included use of electronic communications and a reduction in the number of rounds.

Bäck-Pettersson (2008) asserts that describing the demographics and educational background of the study participants is important in order for the reader to assess the study results. To achieve this, the online survey contained 15 items regarding the individual participants' demographics, access to information and evidence based practice. These data provide not only a demographic profile but also identify the availability and use of resources related to evidence based practice by nurses in this clinical setting.

### **Study Design**

Approval for the conduct of this study was obtained from the Human Research Ethics Committee of the University of Western Sydney. The study was also endorsed by the Australian Practice Nurses Association, Policy and Research Committee.

### **Round One - Creating**

In the first round, focus groups were used to identify primary areas or questions of importance. Participants were asked to identify up to five key research issues in each of the following four broad categories; (1) clinical research that is of highest value to patients; (2) clinical research that is of highest value to the practice nurse role and professional development; (3) clinical research that is of highest value to improving service delivery; (4) clinical research that would facilitate disease prevention and health promotion (Chang and Daly 1998). These categories were used to assist participants to take a broad approach to the task of identifying priority areas. Focus groups were audio recorded to facilitate subsequent analysis.

Invitations to participate in the focus groups were conveyed to all Divisions of General Practice in the Sydney metropolitan area at the time of the study. Practice nurse project officers from these Divisions were asked to indicate their interest in hosting a focus group of their members. Those Divisions that expressed an interest were provided with study information sheets to enable them to recruit interested members to attend the focus group. Recruitment was confined to this area given the resource constraints of the project and location of the researchers. Practice nurses known by the Australian Practice Nurses Association Policy and Research Committee to be engaged in research were invited to participate in a 'virtual' focus group. This strategy was used given the relatively small number of nurses with research experience identified and their geographical dispersion. The data from the focus groups were evaluated using a process of iterative analysis to identify key themes that has been previously described (Halcomb and Davidson 2006).

### **Round Two - Prioritising**

In the second round, participants completed an online survey (Survey Monkey™) where they provided demographic information and graded the relative importance of each item on a five point Likert scale. This scale ranged from one unimportant to five very important.

Invitations to participate in the online survey and survey links were distributed to all Australian Divisions of General Practice and members of the Australian Practice Nurses Association. These organisations were asked to forward the information and link to practice nurses in their regular newsletters and correspondence and place a link to the survey on their websites. Dissemination of information via the Divisions of General Practice was followed up on two occasions by the research team via telephone or email to ensure that the information had been disseminated to practice nurses within each Division. At the completion of the survey, participants were asked to forward information about the project to relevant colleagues. Identifying general practice

nurses has been identified as problematic in a number of previous investigations (Watts et al 2004; Halcomb et al 2008). This difficulty stems from their employment by numerous small businesses rather than by large corporations or government health services as in the acute sector and the absence of identification of this specialty group in nursing registration data (Halcomb et al 2008). Given this recruitment strategy, it is not possible to identify how many practice nurses actually received information about this study, and without a response denominator it is not possible to calculate a response rate. However, other national surveys of this participant group have yielded similar response numbers (Halcomb et al 2008; Watts et al 2004).

The online survey data were imported into SPSS™ and analysed using descriptive statistics. The mean value was calculated for every item. Items were then ranked based on their mean score.

## RESULTS

### Participant Demographics

Twenty-five practice nurses were recruited for the various focus groups. Whilst six individuals were purposively selected based on their research experience and current clinical practice, the remaining 19 participants were practice nurses with no specific research experience. The demographics of the 19 practicing nurses were similar to those of survey participants which are discussed in table one. As new topic areas had ceased to emerge from continued discussions it was identified that data saturation had been achieved.

One hundred and forty-five practice nurses undertook the online survey; however, only 125 (86.2%) participants provided complete data and thus are included in the data analysis. Demographic and educational characteristics of the included participants are presented in table 1. By far the majority of participants were female registered nurses, who ranged in age from 23 to 63 years (mean 46.2 years). Whilst most participants had significant experience in the nursing workforce (mean 22.1yrs, Range 1-42yrs), they were significantly less

experienced in the general practice setting (mean 6.7yrs, range 0-32yrs).

**Table 1: Demographic Characteristics of Survey Participants**

Variable	No.
Gender (female/male)	123 / 2
Age (range)	46.2 years (23 - 63yrs)
Level of Education	
Masters / Doctorate	7 (5.6%)
Graduate Certificate / Diploma	39 (31.2%)
Bachelors Degree	39 (31.2%)
Hospital Nursing Certificate	37 (29.6%)
Other	2 (1.6%)
Nursing classification (Registered/Enrolled)	113 (90.4%)/12 (9.6%)
Years in Nursing (range)	22.1 years (1 - 42yrs)
Years in Practice Nursing (range)	6.7 years (0 - 32yrs)

### Research Priorities

#### Focus Groups

The focus groups identified 73 areas of interest/research questions. A number of these areas were duplicated, contained insufficient detail (e.g. osteoporosis) or were not researchable problems (e.g. relationship between practice nurse wage and role). The researchers observed that participants had some difficulty in identifying specific research topics. It was hypothesised that this might have been related to the limited engagement of participants with peer reviewed literature. Indeed, several participants reported that they could not recall having recently read a publication describing research.

Whilst the researchers identified that some of the topics generated by the focus groups already had a substantial evidence base in the literature, they did not exclude such items from the analysis. It was also identified there were significant areas of overlap between these broad categories. A process of content analysis was used to refine these data into the final 53 items that comprised the online survey. These refined items were better reflected by the three broad categories of clinical research that is of highest value to: (1) practice nurse role and professional development (12 items); (2) general practice service delivery (nine items); and (3) disease prevention and health promotion (32 items).

### Online Survey

The survey data identified 53 priority areas with mean scores ranging between 3.53 and 4.56, indicating they were at least somewhat important to participants. Thirty-four (64.1%) items achieved a mean score greater than 4.0, meaning they were ranked as being 'important' to participants. These

34 items comprised of 17 (53%) items related to disease prevention and health promotion, 12 (100%) items related to practice nurse role and professional development and five (56%) items related to general practice service delivery. Table two lists the 'important' items in order of priority.

**Table 2: Highest Priority Research Issues**

Research Issue	Mean Score	Category
Education needs of Practice Nurse regarding health promotion	4.6	Practice nurse role
Identifying whether Practice Nurse services provided under Medicare improve outcomes	4.5	Disease prevention
Characteristics of effective wound care	4.5	Disease prevention
Factors affecting adherence to treatment in diabetes	4.5	Disease prevention
Additional clinical skills by nurses moving to practice nursing	4.5	Practice nurse role
Whether nurse led clinics improve attendance & compliance	4.4	Service delivery
Effect of routine triaging by Practice Nurse on minor illness management	4.4	Service delivery
Effect of care plans on health outcomes in chronic & complex disease	4.4	Disease prevention
Identifying how Practice Nurses can decrease GP workload	4.4	Practice nurse role
How Practice Nurse make clinical decisions in their practice	4.4	Practice nurse role
Effective interventions in managing chronic wounds	4.4	Disease prevention
Understanding GPs' perceptions of the Practice Nurse role	4.3	Practice nurse role
Practice Nurse's perception of their role in general practice	4.3	Practice nurse role
Aspects of care most valued by general practice consumers	4.3	Practice nurse role
Cost effectiveness of Practice Nurse role	4.3	Practice nurse role
Effect of routine screening for lifestyle risk factors on care & outcomes	4.3	Disease prevention
Whether motivational counselling by Practice Nurses improved lifestyle risk factor modification	4.3	Disease prevention
Most effective risk factor screening tools	4.3	Disease prevention
Factors impacting on childhood immunisation	4.3	Disease prevention
Effectiveness of generalist versus specialist roles of Practice Nurses	4.3	Practice nurse role
Effective interventions for managing adult obesity	4.3	Disease prevention
Factors affecting adherence to treatment in asthma & COPD	4.3	Disease prevention
Factors affecting adherence to treatment in obesity	4.2	Disease prevention
Consumer perception of practice nurse role	4.2	Practice nurse role
Whether immunisation accreditation of practice nurses affects childhood immunisation rates	4.2	Service delivery
Effective interventions for managing clients with cardiovascular disease	4.2	Disease prevention
Explore models of teamwork currently used in general practice setting	4.2	Service delivery
Factors that affect adherence to treatment in cardiovascular disease	4.2	Disease prevention
Communication strategies used in general practice teams	4.2	Service delivery
Effective interventions for managing respiratory disease	4.2	Disease prevention
Views of general practitioners on nurse practitioner role in general practice	4.1	Practice nurse role
Identifying role of practice nurse in child health	4.1	Practice nurse role
Effective intervention for managing obesity in children	4.1	Disease prevention
Factors impacting on uptake of men's health screening	4.1	Disease prevention

### Barriers and access to evidenced based practice

To explore the degree to which participants engaged in continuing professional development they were asked to identify how many paid and unpaid study days they had undertaken in the preceding year.

Participants reported that they had participated in between 0-30 paid study days (mean 3.6 days) and between 0-40 unpaid study days (mean 4.5 days) in the past twelve months.



All participants reportedly had a computer and 124 (99.2%) participants had internet access in the workplace. However, this result may be potentially skewed by the online method of survey data collection. A total of 117 (93.6%) participants stated they used their work computer to search for information.

Given the relative isolation of practice nurses from the rest of the health system, participants were asked about their ability to access a professional library. Indeed, only 84 (67.2%) participants reported that they were able to access professional books and journals from a local source. In terms of membership to professional organisations, 65 (52.0%) participants were members of the Australian Practice Nurses Association, 23 (18.4%) participants reported being members of the Royal College of Nursing Australia, and 36 (28.8%) participants were members of another specialty nursing organisation. The most common memberships in the other category were to the Australian Nursing Federation (27; 21.6%) and Royal Australian College of General Practitioners (affiliate membership) (10; 8.0%).

## DISCUSSION

Compared to the investigation of research priorities amongst other specialty groups (Annells et al 2005; Bäck-Pettersson et al 2008; Bell et al 1997; Chang and Daly 1998), this study identified relatively few research areas which to prioritise. Although not a specific aim of this investigation, a significant finding that came out of the focus groups was that many participants did not have an understanding of research, its role in evidence-based practice and the existing research literature. This was demonstrated through the identification of potential research issues where large bodies of literature already exist, for example, in relation to the choice of wound care products and wound healing. This finding was supported by the survey results, many of the highest priority research issues are addressed extensively in the current literature and so would have likely not have been rated so highly if the participants had the

skills to locate, translate and utilise this evidence. Although such findings are consistent with the literature describing the barriers to evidence-based practice (Tagney and Haines 2009; Bertulis 2008), such a finding highlights the need to explore ways of improving the dissemination of research to practice nurses as well as investigating strategies to translate existing evidence to the general practice context.

A major challenge in the Australian context is the lack of access for practice nurses access to peer reviewed journals that present research findings. Whilst acute and community based nurses often have access to electronic library databases via their employing state/territory government, the cost of such subscriptions is often seen as prohibitive in the small business model of Australian general practice (Halcomb et al 2005). As this investigation demonstrates, although most participants had computer and internet access, very few had access to professional libraries and peer reviewed literature. Issues with access to research evidence are an important barrier to the uptake and utilisation of such evidence in clinical practice (Brown et al 2009; Rycroft-Malone et al 2004).

## Implications for Practice

The lack of engagement in evidence based practice is not only an issue for nurses in general practice. However, the narrow focus of priority areas and difficulties in accessing evidence seen in this study are predominately related to their employment in the small business environment of general practice. Difficulties in accessing the peer reviewed literature significantly impacts upon the ability of practice nurses to use research findings to inform their practice. Before increases in the uptake of evidence can truly be achieved, strategies need to be implemented to support the development of the practice nurses skills in critically appraising research and effectively translating these findings into clinical practice. This is particularly important given that Australian practice nurses have predominately received their pre-registration education via the hospital system, where limited, if any, emphasis was placed on research (Halcomb et al 2008).

This need for the development of a culture of evidence based practice within Australian general practice nurses highlights the potential for productive collaborations between academia and clinicians. Such partnerships could not only increase the research skills of clinicians but also ensure the clinical relevance of research conducted by academics. From this investigation it is clear that further well designed research is needed that focuses on providing evidence for nursing interventions in terms of health outcomes, cost effectiveness and patient satisfaction. Additionally, further investigation of the general practice team and the effect of truly multidisciplinary service delivery require further attention.

In improving the quality of primary care delivered by practice nurses it is also possible to enhance the status of the profession and improve the retention of practice nurses. The release of Australia's first primary care strategy (Commonwealth of Australia 2008), although still under discussion, provides an emerging framework for nurses to think about how they can contribute to national primary care reform.

## CONCLUSIONS

This study set out to identify the research priority areas of Australian practice nurses in an environment where practice nurses are generally isolated and work within a model of small business. The identified research priority areas all related to disease prevention, health promotion, the practice nurse role, professional development and general practice service delivery. Many of these issues reflected current roles and disease states that are privileged by contemporary funding models. In order to promote development of the practice nurse role it is vital that attention be given to generating high quality evidence to support and facilitate role development as understanding and access to evidenced based practice should be an integral part of the practice nurses' role. This means not only investigating the efficacy of what we are doing now, but also exploring where it is that practice nurses want their specialty to go in the future.

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