

Consumers' level of comfort with an advanced practice role for registered nurses in  
general practice: A Queensland, Australia study.

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## **Abstract**

A study was carried out in Queensland, Australia which aimed to ascertain how comfortable consumers were with both the current and an expanded practice role for nurses employed in general practice. Consumers from metropolitan, rural and remote areas were represented. The self-report questionnaire was completed by 87 females and 19 males. Consumers rated their level of comfort from *very comfortable* to *very uncomfortable* on a five point scale in nurses performing 24 different routine and advanced procedures. They were most comfortable with nurses giving vaccinations and managing treatment of wounds and were less comfortable with nurses diagnosing and treating minor illnesses. Overall consumers were very comfortable with nurses performing what may be considered traditional roles of the practice nurse. They were less comfortable with the more extended roles that are seen more as the traditional role of the general practitioner. However for no procedure were consumers uncomfortable in nurses performing that task. There were no differences in responses due to consumers' age, sex or previous contact with practice nurses. These results may be used to expand the role of practice nurses to complement the services provided by general practitioners.

*Keywords: General practice, Practice nurse, Consumer perceptions, Quantitative research.*

## **Introduction**

As reported by the Productivity Commission (2005), there continues to be a workforce shortage across many health professions in Australia, resulting in a need for reform and new models of care. Over the last few years the Australian Government has sought to identify initiatives that would produce a more sustainable and responsive health workforce, while maintaining a commitment to high quality and safe health outcomes (Productivity Commission, 2005)

Advancing the nurse's role in general practice is one strategy that has been implemented. As part of the 2001-2002 federal budget, the Practice Incentives Program was introduced providing support for general practitioners (GPs) in rural and other areas of need to employ nurses. Further funding was allocated to metropolitan general practitioners in the 2002-2003 budget (Department of Health and Ageing, 2003). This practical incentive to employ practice nurses and Aboriginal Health Workers in general practice has been followed by new Medicare Benefits Schedule (MBS) item numbers for wound dressings, immunisations and Pap smears provided by a practice nurse.

The numbers of practices employing nurses has increased dramatically in the last few years. From 2003 to 2005 the number of Australia's approximately 6000 GP surgeries that claimed the practice-nurse incentive rose from 93 to 1617 (Cresswell, & Karvelas, 2006). Walker (2006) cites a recent survey by the Australian Practice Nurses Association and states that there are around 6000 practice nurses in Australia with 50% of practices who employ 4-8 general practitioners employing practice nurses.

Various studies have investigated practice nurses' perceptions of their role. In the main, studies suggest that practice nurses perceive their role as being assistive and therefore practise accordingly (Bonawit & Watson, 1996; Dunt, Temple-Smith, & Johnson, 1991; Keyzer, Hall, Mahnken, & Keyzer, 1996; Patterson, Del Mar, & Najman, 1999a; Patterson, Del Mar, & Najman, 1999b). All of these studies suggested that the main functions of a practice nurse are delegated by the doctor and usually involve undertaking prescribed assessment and therapeutic activities (Dunt et al, 1991). However, many believe that the traditional role of the practice nurse must change. Indeed a study throughout Australia funded by the Department

of Health and Ageing concluded that the future general practice nurse will undertake a greater integrated role with more time spent on clinical care and clinical organisation, and less time spent on practice administration (Royal Australian College of General Practitioners & Royal College of Nursing Australia, 2004).

Factors identified as limiting the development of the practice nurse role include a lack of funding to employ them and to provide for continuing education opportunities, 'gate keeping' of special interest groups, and general practitioners' reluctance to relinquish any 'medical work' to nurses (Condon, Willis, & Litt, 2000; Le Sueur & Barnard, 1993; Patterson et al., 1999a; Patterson et al., 1999b). Although it is recognised that they are working in different health systems, one of the most striking differences between two countries where practice nurses are commonly employed was the attitude of the medical profession – relatively hostile to the extended or advanced practice role of nurses in the USA, and supportive in the UK (Buchan & Calman, 2005).

A recent review notes that most of the evidence of "the use of nurses in 'advanced practice roles' demonstrates their clinical effectiveness and cost effectiveness" (Buchan & Calman, 2005 page 5). The review recognises that comparison across countries is made difficult by different definitions and roles. However, in primary care settings the authors note that data overwhelmingly supports the notion that "nurses can provide care which is equivalent to that provided by doctors in these settings". In fact patients were generally more satisfied with consultations they received from nurses. As extended advanced practice roles for nurses in Australia are being promoted, these findings of Buchan & Calman (2005) on advanced practice nurses, specialist nurses and nurse practitioners cannot be ignored.

In Australia, practice nurses have been a common feature over the last decade and the Australian Government has promoted the role of nurses in general practice since 2001. It is rather surprising therefore that the consumers' perceptions of the role of practice nurses and their acceptance of nurses undertaking responsibilities previously performed by general practitioners received little attention in the country until 2002. In that year two studies were undertaken. One study was submitted to *The National Steering Committee on Nursing in General Practice* (Cheek et al., 2002). For that first study data were collected through the use of 20 focus groups in six states and territories and a thematic analysis undertaken. The authors found that generally consumers had a lack of awareness of the actual or potential scope of nursing in general practice. However, those consumers with a greater exposure to practice nurses, (such as carers and persons with a chronic illness) were able to envisage roles for nurses that extended beyond the traditional role identified in previous Australian studies (Patterson et al., 1999a; Patterson et al., 1999b).

The identified expanded role included: development of care plans, providing education and support, prescribing continuing medications and undertaking Pap smears. However, consumers also expressed concerns about expansion of the role. For example, they were concerned about medico-legal problems for the doctor, possible substitution of doctors by practice nurses and increased costs to the consumer for practice nurse visits. Overall, however, consumers were accepting of nurses in general practice because they trusted the general practitioners to employ suitably qualified and competent nurses. They expected that general practitioners and practice nurses would work collaboratively and in the best interests of the consumer (Cheek et al., 2002)

The second study, the quantitative data from which is that reported herein, was also undertaken in 2002. The project was undertaken in Queensland and aimed to investigate how comfortable consumers would be with an extended nurse role within general practice. Qualitative results for the study which have been published already (Hegney, Price, Patterson, Martin-McDonald, & Rees, 2004; Patterson, Price, & Hegney, 2005) showed that participants had similar concerns to those found by Cheek et al. (2002). Consumers, especially those in rural areas, believed that practice nurses should enhance, not replace, the GP. The expressed benefits of practice nurses included more time being made available to general practitioners and a more holistic and family-oriented approach offered by the nurses than that offered by general practitioners. Consumers stated that their choices should remain and neither nurses nor general practitioners should act as gatekeepers to each other (Hegney et al. 2004).

The study also collected consumers' acceptance on a wide range of tasks that a practice nurse might undertake – especially those tasks that would be considered to expand the current practice of nurses in general practice. To gather these data, a separate quantitative tool (referred to as a 'consumer comfort' scale) was developed. This paper specifically focuses on the results of the use of this methodology.

## **Methodology**

### *Participants*

All community members who were consumers of general practice care were eligible to participate in the study. The study aimed to include both sexes and people from a diversity of culturally and linguistically diverse backgrounds. The collection methodology aimed to include general practices in a variety of locations and practices that did and did not employ a practice nurses. To ensure that people who

were most likely to access general practice were included, the following groups were targeted: (a) parents or carers of young children; (b) people with a chronic disease; and (c) older people (defined as over 70 years of age).

Participants were recruited from remote, rural and metropolitan areas as classified by the Rural, Remote and Metropolitan Area Classification 1991 Census Edition (Department of Primary Industries and Energy and Department of Health and Human Services, 1994). Recruitment was through individual general practices, a Division of General Practice, through community groups (e.g., Indigenous health service, sporting/religious group) and other contacts from within the community.

A plain language statement and consent form was provided to potential participants. Appointments were established to meet with the research team for all persons who verbally agreed to participate in the study. Signed consent forms had to be received either prior to or at the time of the appointment for participation to continue.

### *Materials*

A questionnaire was developed from a number of sources including a literature review and fact sheets from the Australian Government Department of Health and Ageing. The questionnaire comprised items to elicit demographic data (e.g., sex, age and geographical location), frequency and reasons for visiting the doctor, practice data (e.g., number and sex of doctors and practice nurses) and level of comfort with potential practice nurse activities.

There were a total of 14 questions. Ten questions were categorical items requiring circling one of several possible answers (e.g. male or female) and one required entering a postcode. There were two further categorical items (questions 11

and 13). Question 11, on reasons for attending a doctor, allowed for multiple responses to 10 offered choices and a free text to add other reasons. Question 13 asked for a ranking of preference for seven means of communication about changes taking place in the doctor's surgery.

The final question (Question 14) offered the comfort scale. It listed 24 services that an appropriately trained and qualified practice nurse could provide. Participants were requested to indicate on a five-point Likert scale (1 = *very comfortable*, 2 = *somewhat comfortable*, 3 = *undecided*, 4 = *somewhat uncomfortable* and 5 = *very uncomfortable*) how comfortable they would be with a practice nurse providing each service. Procedures that would be considered both "routine" (n=14) and "advanced" (n=11) were included for comparison of patients' perceptions (see Table 3), however the complexity of the task was not identified on the survey.

Prior to use in the main study, the questionnaire was piloted by three nurses, one general practitioner and four consumers for readability and understanding. Their suggestions were incorporated into the final version of the questionnaire.

### *Procedure*

Participants met the research team in one of five towns in readily accessible venues (e.g. community halls, meeting rooms attached to community organisations). The questionnaire was completed prior to collection of the qualitative information through interview or focus group. The research team provided clarification of any items if requested, but ensured the privacy of each participant when they were completing the questionnaire. The questionnaire took approximately 15 minutes to complete.

### *Statistical Analyses*

Analyses of quantitative data were performed using the Statistical Package for Social Scientists (SPSS) program, version 11.5. Descriptive statistics, such as percentages, means and standard deviations, related to each survey question were calculated. Chi-squared analysis was undertaken to determine if differences existed between age or place of residence with sex, frequency of visits to a GP and contact with a practice nurse. Analysis of variance was used to determine differences in the level of comfort of respondents of nurses performing certain tasks and age, location of residence and frequency of contact with general practitioners. Post hoc tests were undertaken using Least Squares Difference tests with Bonferonni adjustment.

### *Ethics approval*

Ethics approval for this study was obtained from the University of Southern Queensland's Human Research and Ethics Committee.

## **Results**

### *Demographic data*

Of the 106 participants, 19 (18%) were male, and 87 (82%) were female. Table 1 outlines the number and percentage of participants in each age group. As only two participants were less than 20 years of age and only five 80 years of age or older these data were combined with the 20 to 29 and 70 to 79 age groups, respectively. **Insert table 1 here**

Twelve (13%) participants were Indigenous, 25 (23%) had young children and 5 (5%) came from a non-English speaking background. Chronic disease was reported by 37 (35%) of those surveyed, with 41 (38%) and 32 (30%) making more than 10 and between 5 and 10 visits, respectively to see their GP in the last 12 months.

The majority of participants (83, 78%) stated that their GP practice employed a practice nurse, 17 (16%) were unsure and only 6 (6%) stated that there was no practice nurse employed. Seventy-three (72%) of the total participants reported that they had some contact with a practice nurse, however most (80%) were unaware of his/her qualifications.

There were no differences in the age of participants attributable to their sex ( $\chi^2 (5) = 7.65, p > .05$ ), how often they had seen a GP ( $\chi^2 (10) = 12.50, p > .05$ ), whether the GP's surgery had a nurse employed ( $\chi^2 (10) = 18.28, p > .05$ ), the length of time the surgery had a nurse employed ( $\chi^2 (5) = 8.71, p > .05$ ) or whether the respondents had any contact with a practice nurse ( $\chi^2 (5) = 5.66, p > .05$ ).

Six participants did not indicate their place of residence. The remaining 100 of the 106 participants lived in five main locations in Queensland. The number, percentages and ages of participants in each of these locations are outlined in Table 2. There were significantly fewer participants under 50 in the two remote locations of Longreach and Roma than in the other three locations ( $\chi^2 (4) = 19.32, p < .05$ ). **Insert Table 2 here**

Participants were asked to indicate their post code of residence but not the name or address of the GP practice they attended. Therefore the number of practices represented by the participants within the five locations is not known. However it was possible to approximate the number of practices from the responses to the questions on presence of a practice nurse and numbers and gender of doctors within the practice the participant attended. These data suggest that the number of practices represented by clients in the Gold Coast was at least four and in Brisbane six or

more. For Toowoomba, Longreach and Roma the numbers were four, one and three, respectively. The numbers of practices and respondents within practices do not permit any within location analysis.

There were no differences in place of residence by sex ( $\chi^2 (4) = 8.13, p>.05$ ), how often they had seen GP ( $\chi^2 (8) = 13.17, p>.05$ ), whether the GP's surgery they attended had a nurse employed ( $\chi^2 (8) = 8.65, p>.05$ ), the length of time the surgery had a nurse employed ( $\chi^2 (8) = 11.16, p>.05$ ) and whether patients had contact with a practice nurse ( $\chi^2 (4) = 1.61, p>.05$ ).

#### *Comfort of participants with the role of the Practice Nurse*

The major focus of the questionnaire was to ascertain the participants' levels of comfort with the various roles a practice nurse could undertake. Table 3 provides the number of responses, means and standard deviations for each of the items in the subscale (*very comfortable, somewhat comfortable, undecided, somewhat uncomfortable and very uncomfortable*) that measures consumers' levels of comfort with practice nurses performing the designated services. **Insert Table 3 here.**

Mean values were all between 1.09 and 2.26 and the neutral mean value of 3 (undecided) was not reached for any procedure. On average only 3.8% and 3.3% of participants noted that they were *somewhat uncomfortable* (value of 4) or *very uncomfortable* (5) with procedures being undertaken by nurses.

Participants were most comfortable with practice nurses giving vaccinations (n=93, 87% *very comfortable*) and managing the treatment of wounds (n=86, 81% *very comfortable*) followed by providing education related to health issues (n=73, 69% *very comfortable*) and performing home safety checks for falls risks (n=68, 64%

*very comfortable*). All four procedures are considered to be routine nursing procedures.

The areas that participants were least comfortable with were the advanced procedures of: diagnosis and treatment of minor illnesses (n=34, 32% *very comfortable*), prescribing legally sanctioned medication following medical guidelines (n=36, 34% *very comfortable*) and performing medical assessments for insurance (n= 34, 32% *very comfortable*). Even though these three procedures had the largest number of people who were *somewhat* or *very uncomfortable* with the thought of nurses performing the procedures in no case did the combined number exceed 17 (16%).

There was a significantly different response between the level of comfort to nurses performing routine (mean = 1.56, SD .58) or advanced (mean = 1.95, SD .76) tasks ( $t(105) = 11.46, p < .001$ ). Out of the 24 procedures, the first 10 in level of most comfort came were routine tasks and 8 of the 10 with the lowest comfort rating came from the advanced tasks.

There were no statistical differences ( $p > .05$ ) for any of the 25 items with the person's age or number of times that they had contact with their GP. There was however a statistically significant effect between the location of residence and the level of comfort with practice nurses giving test results, ( $F(4, 87) 5.59, p < .05$ ). Significant differences were found between Longreach and Toowoomba ( $t = -1.61, p < .05$ ), Longreach and Gold Coast ( $t = -1.39, p < .05$ ), Longreach and Brisbane ( $t = -1.38, p < .05$ ) and Longreach and Roma ( $t = -1.30, p < .05$ ). In all cases participants from Longreach were less comfortable with practice nurses giving test results than were participants from other locations.

Significant effects were also found between location and the level of comfort with practice nurses providing counselling or grief counselling ( $F(4, 84) 4.02, p < .05$ ). Roma differed from Toowoomba ( $t = -1.16, p < .05$ ), Brisbane ( $t = -.95, p < .05$ ) and Gold Coast ( $t = -.93, p < .05$ ). In all cases participants from Roma were less comfortable with practice nurse providing counselling than those participants from Toowoomba, Brisbane and Gold Coast.

An independent sample t-test was conducted on level of comfort with previous contact with a practice nurse. The level of comfort ( $M = 1.66, SD = .56$ ) was not significantly different from who had not had contact with a practice nurse ( $M = 1.72, SD = .79$ ),  $t(91) = .443, p > .05$ .

## **Discussion**

The results of this study determined consumers' perceived level of comfort with practice nurses performing a variety of routine and advanced nursing roles in general practice. Participants were recruited through contacts and this may mean that the results are biased towards those people who are members of community groups and those who had time to be interviewed or attend focus groups. However as many of the results concur with a national study undertaken at the same time (Cheek et al., 2002) there is confidence that the results do reflect consumer perceptions and preferences.

It must be recognised that the data reported in this study were collected in 2002. Since that time many changes have occurred within the Australian health system including far greater use of practice nurses and extended roles of those nurses. However the data remain valid and are especially important as only one

other study exists that determines consumers' perceptions, i.e. that of Cheek et al (2002).

One limitation to the study was that the word *comfortable* was not defined to the participants. Interpretation by individual participants of the question "how comfortable would you be to a practice nurse performing [procedure]?" is not known. The assumption by the researchers in designing the questionnaire was that *comfort* would be indicative of a mental state of being at ease rather than a physical state of pain or discomfort.

Most respondents in the study did not know the qualifications of the nurses at their practice. Yet, despite this, most participants in this study were *comfortable*, if not *very comfortable* with practice nurses expanding their role in general practice. There were no differences in the present study in the responses of participants regardless of their prior contact with a practice nurse. The data suggest that patients are confident that the support they will receive at their doctor's surgery will be appropriate. These findings concur with Cheek et al. (2002) who found that consumers were generally accepting of nurses in general practice. They explained that consumers accepted this new role because they trusted the doctor to employ suitably qualified and competent nurses and they expected that doctors and practice nurses would work collaboratively and in the best interests of the consumer.

At the time of the survey Pap smears, vaccinations and wound management did not qualify for MBS rebate. Item numbers for vaccinations and management of wounds were not introduced until 2004 and yet the levels of comfort in nurses performing these two tasks were the highest of all procedures. In contrast the third item on the MBS rebate scheme – Pap smears – for which an item number was introduced in 2005, was rated as one of the lowest in relation to level of comfort. The

reasons why the Australian Government have chosen particular practice nurse tasks to be recovered under MediCare items is not known, however it is highly probable that the decision was based on other factors than consumer comfort with the expanding role of practice nurses.

Cheek et al (2002) noted that participants were not really aware of the role of nurses in a practice setting. This lack of understanding meant that the consumer was unable to visualise expansion of the role. However in our study it appears that some participants could visualise expansion to the additional tasks that were offered.

Perhaps this was because of the relatively high degree of prior exposure to practice nurses.

The only statistical differences in the study due to demographic variables were in the level of comfort to nurses providing test results and counselling. In both cases a remote community was least comfortable with the procedure. These two remote areas had younger participants than those in the three other locations. It is unclear whether age influenced these results. However it has been noted that concern about practice nurses being substitutes for the GP is most evident in rural and remote areas (Hegney et al., 2004) and the results could be a reflection of this.

The complexity of the nursing procedures was not identified on the questionnaire. We had hypothesised that although consumers may not be expected to know the distinction between routine and advanced roles of nurses, that they would have a perception of the complexity of procedures and thus rate them differently. This was indeed the case. In most instances consumers were very comfortable with nurses performing what may be considered traditional roles of the practice nurse. They were less comfortable with the more extended roles that are seen more as the traditional role of the general practitioner. When advanced

assessment decisions were needed or the consumer believed the nurse was diagnosing, treating and prescribing they were least comfortable with this role. This extended to the task of giving advice over the phone which received the lowest rating of all the routine tasks.

There were two major exceptions in the advanced tasks; consumers were most comfortable with nurses performing well-baby checks and providing ante and post natal care and advice. However these tasks, although not routine for a registered nurse, would be a routine task for a midwife or a child and family health qualified nurse.

It should be noted that for no procedures whether they were routine or advanced were consumers 'uncomfortable'. The results suggest that if the questions had been worded differently in that it was made clear that the nurses would have been educationally prepared for this advanced role, then a different and even more positive response may have been elicited.

It should also be noted that some of the tasks that the team have identified as 'routine' do require additional education and training and/or continuing professional education and training. Using tasks as the indicator of advanced practice, the question to be asked as a result of this paper is: What is a routine versus advanced practice role for a registered nurse?

In conclusion, the results of this study largely concur with those of the national study undertaken at the same time. However, they do offer a different perspective in that quantifiable data were collected. The cumulative data from the study reported herein, the qualitative data from the study reported elsewhere (Hegney et al., 2004) and those from a national study (Cheek et al., 2002) now provide policy makers and

practitioners alike with the necessary information as to what consumers want. Recognition that general practitioners, practice nurses and consumers are all key stakeholders to improvement in health service provision appears to have been somewhat lacking in development of initiatives. The data also provide further fuel for the debate around what defines routine versus advanced (or expanded) practice of nurses.

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Table 1. Frequencies and percentages of participants by age category

Age group	Number	Percentage
30 and younger	15	14.2
30 - 39	13	12.3
40 – 49	16	15.1
50 – 59	20	18.9
60 - 69	21	19.8
70 and greater	21	19.8
Total	106	100

Table 2. Frequencies, percentages and ages of participants by location

Location	RRMA	Number	Percentage	< 50	50 and older
Brisbane	1 (metro)	22	22	9	13
Gold Coast	2 (metro)	21	21	3	18
Longreach	7 (remote)	15	15	11	4
Roma	6 (remote)	21	21	14	7
Toowoomba	3 (rural)	21	21	6	15
Total		100	100	43	57

Table 3. Means, Standard Deviations (*SD*) and Number of Respondents (*N*) who indicated their Level of Comfort with Practice Nurse Providing the following Services

Procedure	Routine (R) or advanced (A)	Mean*	SD	N
Doing well-baby checks	A	1.43	0.84	79
Giving ante and post natal care and advice	A	1.48	0.86	80
Giving family planning advice	A	1.74	1.00	86
Doing breast examinations	A	1.83	1.22	87
Counselling and/or grief counselling	A	1.84	1.06	93
Overseeing management of chronic illnesses	A	1.84	1.04	98
Assessing risk factors for disease	A	1.89	1.05	98
Doing Pap smears	A	2.13	1.40	85
Performing medical assessments for insurance	A	2.14	1.14	94
Diagnosis and treatment of minor illnesses	A	2.25	1.24	97
Prescribing medications following medical guidelines	A	2.26	1.36	98
Giving vaccinations	R	1.09	0.32	101
Managing treatment of wounds	R	1.19	0.60	98
Providing education related to health issues	R	1.34	0.69	98
Doing home safety checks for falls risks	R	1.40	0.80	91
Performing routine tests such as blood sugar levels	R	1.48	0.88	97
Giving follow up care post discharge from hospital	R	1.51	0.87	97
Managing aged care	R	1.52	0.89	93
Giving lifestyle advice	R	1.54	0.88	94
Being the initial contact at the surgery in an emergency	R	1.61	0.90	100
Checking medications you are currently taking	R	1.62	0.98	99
Doing routine health checks	R	1.63	0.98	101
Giving patients test results	R	1.83	1.20	98
Giving health advice over the phone	R	2.10	1.23	98

\* mean calculated from five-point Likert scale (1 = *very comfortable*, 2 = *somewhat comfortable*, 3 = *undecided*, 4 = *somewhat uncomfortable* and 5 = *very uncomfortable*)

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