**The role and functions of Clinical Nurse Consultants, an Australian advanced practice role: a descriptive exploratory cohort study**

**Abstract**

*Background*

The NSW Health Policy Directive (NSW Department of Health 2000) lists clinical service and consultancy; clinical leadership; research; education; clinical services planning and management as the five domains of practice for nurses appointed as Clinical Nurse Consultants (CNCs), an Australian advanced practice nurse (APN) role. However, there is no clear definition of what is meant by advanced practice in the Australian nursing context. Nowhere is this more evident than in differentiating between the roles of Clinical Nurse Consultants (CNCs) and Nurse Practitioners (NP) in NSW. To date, limited empirical research has been done to characterise or delineate CNC role activity and responsibility.

*Objectives*

To investigate i) the nature of CNC roles, activities and responsibilities, ii) differentiate between CNCs by their work patterns and activities, and iii) empirically conceptualise and differentiate ways CNCs practice in terms of an APN typology.

*Participants*

The study sample was 56 CNCs at one tertiary level public hospital in Australia.

*Methods*

A descriptive exploratory cohort study was conducted to explore CNC role characteristics and patterns of activity. Data were triangulated using an online survey, a follow-up survey, and semi-structured interviews. The data were analysed using descriptive statistics to examine differences between CNC work patterns and role activities. The survey data and the individual reports were thematically analysed to investigate for difference across the population of CNCs.

*Results*

Interpretation of survey and interview data led to an analyst-developed CNC typology of four CNC categories based on the work patterns and activities of *Sole Practitioner*, *Clinic Coordinator*, *Clinical Team Coordinator* and *Clinical Leader*. The typology was based on the themes *interprofessional*, *role focus,* *clinical focus* and *setting* as these themesdistinguished and differentiated CNC roles.

*Conclusions*

The study provides evidence of great diversity and prioritisation within CNC roles. The CNC typology identified in this study is similar to the categorisation of the roles of APNs reported by other researchers. With further testing, the CNC typology could be useful to service managers and policy makers in making decision on the category of CNC required for a position and may also be able to be applied to other APN roles.

**Summary Statement**

*What is already known about this topic*

* Research studies from a variety of different countries have focussed on the importance of APNs in optimum health care delivery and promoting positive staff and patient outcomes.
* There is reported to be a lack of clarity on the nomenclature, role categorisation and range of activities in which APNs are engaged across a number of countries
* Confusion still exists regarding the scope of practice and key responsibilities for many APN roles.

*What this paper adds*

* This paper presents the characteristics of all CNCs employed in one tertiary referral hospital including their demographic features, the activities they are engaged in and their work patterns.
* It provides a profile of their range of role, activity and responsibilities.
* It delineates four different categories of CNC based on their work patterns and activities, which are distinguished on the basis of four domains, namely; interprofessional, role focus, clinical focus and setting.
* These findings provide a new insight for those charged with developing and reviewing the employment and performance of CNCs. With further testing, the typology may be able to be adapted for use with other APN roles.

**Key Words**

Clinical Nurse Consultants, advance practice nursing, nursing administration research, professional autonomy

**Introduction and Background**

*APN roles internationally*

In a study of the nomenclature used to describe advanced practice nurses across several countries including Australia, Duffield and colleagues concluded that advanced practice nurses (APN) ‘are, and will continue to be, an important provider of cost-effective and accessible healthcare in the 21st century’ ([Duffield et al. 2009, p. 60](#_ENREF_13)). However, they also noted that the difference in nomenclature continues to cause confusion over roles, scope of practice and professional boundaries. Internationally and nationally there is increased attention being paid to understanding the role of APNs in the health care sector.

APNs are well positioned to assist with future health service demand. The American College of Surgeons and others have recently argued that there needs to be a greater use of APNs (and physician assistants) in the USA to meet the future health care needs of the ageing population, to respond to the increase in the incidence of chronic health conditions, and to address difficulties in attracting and retaining suitably qualified physicians ([American College of Surgeons 2011](#_ENREF_2); [Sargen et al. 2011](#_ENREF_30)). Evidence from a systematic review by Laurent and colleagues ([Laurant et al. 2009](#_ENREF_21)) found no statistically significant difference between doctors and APN care in terms of health outcomes for patients, process of care, resource utilisation or costs. Similarly, Newhouse and co-workers ([Newhouse et al. 2011](#_ENREF_25)), in the USA, reported equivalent, or in some cases, better patient outcomes with APN care, in collaboration with physicians, than when care was provided only by physicians.

However, whilst the number of APN roles is increasing, there remains a degree of uncertainty about role clarity as a number of researchers have highlighted ([Chang et al. 2010](#_ENREF_8); [Gardner et al. 2007](#_ENREF_16); [Lowe et al. 2012](#_ENREF_22)). More precisely, there is a lack of clarity regarding the distinction between different APN roles, for example Clinical Nurse Consultant and Nurse Practitioner, and the diversity of responsibilities and activities within the same APN role ([Karnick 2011](#_ENREF_19); [Thoun 2011](#_ENREF_36)). The lack of APN role clarity has resulted in underutilisation and poor support of the role, and constrains workforce planning ([Bloomer & Cross 2011](#_ENREF_5); [Holloway et al. 2009](#_ENREF_17)).

Given the diversity of APN roles, it is not surprising that there remains some ambiguity about the conceptualisation and differentiation of role activities and responsibilities ([Bryant-Lukosius et al. 2004](#_ENREF_6); [Chiarella et al. 2007](#_ENREF_9); [O'Baugh et al. 2007](#_ENREF_28)) Nonetheless, whilst some variability and flexibility between and within APN roles may be desirable, too much variability may lead to role ambiguity, which has been associated with a number of negative staff outcomes such as decreased job satisfaction, increased intention to leave ([Acker 2004](#_ENREF_1); [Eys et al. 2003](#_ENREF_15)) and higher rates of turnover and burnout in both APNs and registered nurses ([O'Brien-Pallas et al. 2010](#_ENREF_29); [Spooner-Lane R & Patton W 2007](#_ENREF_34)).

*The Australian context*

Within Australia advanced practitioners are regulated by each state rather than at a national level. An advanced practitioner is a registered nurse who is educated to function with autonomy and undertake extended clincial nursing activities ([Duffield et al. 2011](#_ENREF_12)). The Australian health system has over recent decades introduced APN roles and the introduction and development of one of these, the Clinical Nurse Consultant (CNC), has been well documented ([Appel et al. 1996](#_ENREF_3); [Dawson & Benson 1997](#_ENREF_11); [O'Baugh et al. 2007](#_ENREF_28); [Vaughan et al. 2005](#_ENREF_37) ).

The CNC role was first introduced into public hospitals and health services in NSW (an Australian state) in 2000 and was modelled on the Clinical Nurse Specialist (CNS) positions in the UK and USA ([Jannings & Armitage 2001](#_ENREF_18)). To be appointed as a CNC in NSW, a registered nurse requires at least five years full time equivalent post-registration experience, and in addition, needs to have completed approved post-registration nursing/midwifery qualifications relevant to the field in which s/he is appointed or such other qualifications or experience deemed appropriate ([NSW Department of Health 2008](#_ENREF_27)). The responsibilities of CNCs are similar to those of other APN positions in other Australian states and internationally. They are expected to perform functions across five domains; clinical practice and consultation, leadership, education, research, and clinical services planning and management ([Dawson & Benson 1997](#_ENREF_11)). However, as with many other APN roles, whilst general agreement may be reached about the broad domains of CNC practice, previous research has shown that ambiguity exists around the precise nature of roles, responsibilities, and scope of practice ([Chiarella, Hardford & Lau 2007](#_ENREF_9); [Currey et al. 2011](#_ENREF_10); [Duffield et al. 2009](#_ENREF_13); [Lowe et al. 2012](#_ENREF_22); [O'Baugh et al. 2007](#_ENREF_28)). There is no clear definition of what is meant by advanced practice in the Australian nursing context ([Duffield et al. 2011](#_ENREF_12)). Nowhere is this more evident than in differentiating between the roles of Clinical Nurse Consultants (CNCs) and Nurse Practitioners (NP) in NSW.

Therefore, the aim of the study was to investigate i) the nature of CNC roles, activities and responsibilities, ii) differentiate activities and characteristics between CNC roles, and iii) empirically conceptualise and differentiate ways CNCs practice in terms of an APN typology.

**Method**

*The hospital*

The study was conducted over two months in 2009 in a single tertiary referral hospital providing both inpatient and non-inpatient services. The hospital has 339 beds and 150 different clinical departments. In 2007/8 the hospital cared for over 25,000 inpatient admissions and provided over 700,000 non-inpatient occasions of service (emergency, out-patient, home visits and community care attendances).

*Recruitment*

All 56 CNCs employed at the hospital were invited by the Director of Nursing to participate in the study. The participants had been made aware of the study and its purpose via emails sent from hospital management. The hospital emails were sent prior to the commencement of the research, and described the aims of the study and invited participants to raise any concerns they may have had. Although participation was not mandatory, all CNCs agreed to participate in the study and this 100% participation rate was unexpected. A number of CNCs explained their keenness to participate was because this was the first research into the CNC role to be undertaken at the hospital since the role was introduced.

*Procedure*

An invitation to complete an online survey was sent via email to all CNCs. In the email a password was provided and a link to the online survey. One follow-up email reminder was sent to those who had not responded and return of the survey was taken to reflect participant consent. To protect confidentiality the study team member sending the emails and collecting the identifiable quantitative data did not participate in the interviews. All quantitative and qualitative data was de-identified before analysis.

Following analysis of the online survey, a pre-interview survey was designed and distributed via email and participants were asked to bring the completed survey to their interview. The purposes of the face to face semi-structured interviews were to validate the data supplied by CNCs in the survey; to capture additional data not possible to collect through a survey (for example, how their role was established); to provide the CNCs with the opportunity to brief the investigators on the unique aspects of their work and roles; and for the investigators to gain a more detailed understanding of the CNC role and scope of work. The responses to the pre-interview survey were used to guide the interviews and encourage the free flow of discussion. To ensure anonymity, privacy, and confidentiality for participants the interviews were not audio-taped. Participants were also offered the opportunity to check the notes made by the researchers during the interview. Verbal consent was obtained from all participants prior to each interview.

*Ethics Approval*

The study was approved by the Human Research Ethics Committee of the hospital and the University.

*Funding and conflict of interest*

The research was funded by the hospital within which it was located as part of a wide review of nursing services. This study was based on data collected during the wider study and no funding was received in relation to the cost of preparing this paper and it has been written with the knowledge of the funding hospital. There are no conflicts of interest to declare.

*Data collection*

The first online survey collected basic demographic data and an estimation of the proportion of CNC time spent on the different areas of practice. The areas of practice were derived from the literature and the NSW Health CNC role domain descriptions ([NSW Department of Health 2000](#_ENREF_26)). The second, pre-interview, survey collected data on the range of role activities the nurses undertook in a typical week. Semi-structured interviews were conducted by two researchers over three days, with each CNC interviewed once at a prearranged Interview time. Interviews lasted for between thirty and forty five minutes and were conducted confidentially in a closed room at the hospital, which was on a different floor to the clinical areas in which the participants worked. The responses of participants were manually recorded by the interviewers in full view of the participant. The first part of the interview sought clarification of the responses provided in the pre-interview survey. The second part consisted of a semi-structured discussion around key themes such as *tell me about your average day*, *how your role/position evolved,* *what is the nature of the research in which you are involved*, and *what activities/ role/ functions distinguish your position from other categories of advance practice nurses*. To maximise recording consistency, the interviewers exchanged and reviewed the records of interview regularly during the interview period and progressively conferred on the process.

*Analysis*

Quantitative data were analysed using PASW version 18 ([SPSS Inc. 2009](#_ENREF_35)). The descriptive statistics reported below were calculated for variables dependent on the level of measurement (mean and standard deviation for continuous variables, frequency and percentage for categorical). Interview data was analysed by the two researchers who conducted the interviews. To ensure analytical consistency, the interviewers examined the record of each interview, and then together identified the themes and generated role characteristic profiles for CNCs. The characteristics detailed what the CNCs did, where they did it and with whom they worked. The two researchers then reread each profile and re-coded role characteristics into shared patterns to strengthen and build the themes.

**Results**

*Demographics*

The majority (94.6%; n=52) of CNCs, were female, 91.1% (n=51) were aged over 35 years and 17.9% were aged over 55 years. These characteristics are consistent with the profile of the nursing profession in Australia where 92% of nurses are female and 18% are aged over 55 years ([Australian Institute of Health and Welfare 2010](#_ENREF_4)). The largest subset of participants was in the 35-39 (21.4%; n=12) year age range. Only one (1.7%) CNC was under 30 years of age. There was significant variation in regards to the highest nursing qualification attained. Just over 32% (n=17) of those surveyed listed a Master of Nursing as their highest nursing related qualification; 17.9% (n=10) of participants listed a bachelor degree (three year university qualification) as their highest nursing qualification; and 16.1% (n=9) nominated a graduate diploma (two year university qualification) and 35% (n=20) held a hospital certificate (three year hospital based training).

***Activities***

Table 1 illustrates the reported and preferred proportion of CNC time spent on different role activities (the *preferred time* is the proportion they thought they should be spending on activities). Participants indicated that the majority (mean 58.5%) of their working hours were spent on clinical patient care activities, such as providing specialist nursing care either alone or with other nurses, assessment and diagnosis, ordering and conducting diagnostic interventions and providing specialist procedures (such as diagnostic tests for endocrine, allergies, sensory and eating disorders), providing clinical advice to patients, carers and other health professionals. Administration (meetings, planning) and management (direct supervision of other staff) took up about 15.3% of time. A slightly smaller amount of time (mean 14.3% of hours worked) was spent on educational activities (educating other staff, educating parents or carers or health staff at other institutions), whilst 9.1% of the time was spent on research. Interview data clarified that for most CNCs, the time spent on research was mostly focused on quality improvement projects, rather than funded research, however, a small number of CNCs had led nurse directed funded research. The average across all CNCs for time spent on travel outside the hospital was 2.8%, however there was considerable variation across the cohort (50% reported no travelling in a typical week, 20% reported less than 5% of time spent on travel, 30% reported between 5% and 10%; one CNC reported more than 20% of her work time was spent travelling)

Participants were also asked to nominate the proportion of time they would have preferred to spend on each activity. There was little variation in time participants reported spending on activities and the time they would have preferred to spend on activities. On average the CNCs suggested a slightly greater proportion of their time should be spent on education (2.5%) and research (3.0%), and slightly less on clinical care (0.7%), administration and management (1.0%). These results are reported in Table 1.

**INSERT TABLE 1 HERE**

Additional detail on clinical activities was obtained from the pre-interview survey. Participants (96%; n=54) ranked their activities, in a typical week, from the one they spend most time on (1) to least time spent on (7). There were two (4.0%) missing data points. Table 2 shows the frequency of activities listed as *most*. Of the clinical activities the nurses undertook, the highest ranked were case management, direct clinical care, and discharge and transition planning (total 77.8%, n=42). The next category of activity was education (18.5%, n=10) which included patient and family education, and professional education. Research was ranked highest in only 3.7% (n=2) of cases. The range of activities categorised as *case management* included arranging continuing care in the community, organising patient reviews and follow-up medical appointments. The second most highly ranked clinical care activity, *direct clinical care*, was clarified at interview to mean direct involvement in assessment and diagnosis, diagnostic intervention and or ambulatory care activities such as administering specialist treatments. Clinical care also consisted of giving clinical advice to patients and families by telephone and attending patient rounds with other health professionals. For some, these last two activities constituted the bulk of their clinical care work. Although involved in specialist clinical work, unlike authorised Nurse Practitioners, the current legislation in Australia does not allow CNC’s to independently prescribe pharmacological agents or independently order diagnostic procedures and tests.

**INSERT TABLE 2 HERE**

In a typical week, 33.9% (n=19) of CNCs reported spending most of their working time at their workstation. When this was clarified at interview, the explanation for the large amount of time spent in the office was the need to have telephone consultations with patients and families, organise referrals to outpatient clinics, or services for hospital discharged patients. About 27% (n=15) of CNCs reported spending most of their time on the ward. At interview this was clarified as attending rounds with medical staff, reading patients’ notes, *keeping in touch* with patients’ progress, and spending time supporting nurses on the ward to provide care. This support was provided through clinical supervision, education and consulting. Thirty-two percent (n=18) of CNCs reported that they were conducting outpatient clinics as their major activity. Twenty-seven percent (n=15) of CNCs reported spending most of their working hours in a location within the Hospital other than the unit to which they were attached or where their work station was located.

There was considerable variation in the number of different patients and families with whom CNCs engaged in a clinically meaningful way (Table 3). Fifty-four percent (n=30) of CNCs reported being engaged with between 6-20 different patients/ families per week; while 28.6% (n=16) reported engaging with over 25 different patients/families per week.

**INSERT TABLE 3 HERE**

There was wide variation in the extent to which the CNCs saw their role as extending across hospital services and this is illustrated in the data presented in Table 4. For some, significant involvement in a number of wards and departments during the working week was usual practice. In contrast, others left their work unit on only a handful of occasions across the week. Almost half (n=25, 44.6%) of the CNCs surveyed reported having contact with between 4-6 different wards/departments outside their clinical team over the course of a typical week. A further 26.8% (n=15) reported having contact with between 1-3 different wards/departments outside their own, whilst the same percentage of participants (26.8%, n=15) had contact with more than seven different wards/departments outside their own in a typical week. Thirty percent (n=17) of CNCs reported that they were part of a wider team of advance practice nurses; while 28% (n=16) of CNCs indicated that they were the only APN to work in their Department.

**INSERT TABLE 4 HERE**

 **Emerging themes**

Data interpretation identified four key themes which could be used to differentiate CNC roles and responsibilities.

*Interprofessional*

The first theme identified was *interprofessional*. Depending on the speciality area, some CNCs tended to see patients only with other members of their team present. For example, some CNCs working in the ambulatory care setting tended to work almost exclusively in multidisciplinary teams. As such, when consulting with patients, it was common for other members of the team (such as a physician or dietician) to also be involved in the discussion. The experience for other CNCs was that patients were seen individually by each health care professional but with care planning done collectively as part of a team. A third category of CNCs (such as those working in the community) worked independently and complementary to a team for part, or most, of their time. This small number of CNCs functioned as sole decision-makers in relation to the care they provided and in making clinical decisions would refer as appropriate to other medical professionals. For example, they referred patient changes to general practitioners and or specialist physicians, but did not work with them in formalised teams. For example, one CNC reported that she spent 40% of her time in patients’ homes, a pattern of work clearly different to that of nurses who worked primarily in the ambulatory care clinic setting or on the wards.

*Role focus*

A second theme that differentiated the work activities of the CNCs was *role focus*. Within the hospital some CNCs were part of a wider team of APNs, (including other CNCs, clinical nurse specialists and, occasionally, nurse practitioners) while others reported that they were the only CNC to work in their Department, and the only APN for the clinical area. Some CNCs described how they had extensive specialist knowledge in a small speciality area (e.g. diabetes; neonatal or obesity), whilst others claimed they possessed advanced practice skills specific to their area of practice (e.g. emergency medicine). CNC work was often distinguished according to diagnostic or disease patient groupings. For example, some CNCs focussed on disease management involving the care of patients diagnosed with particular conditions, such as endocrine or renal disorders. In contrast, other CNCs were attached to specific areas of the hospital, such as the emergency department or intensive care, and in these roles, managed patients who were experiencing a variety of different conditions. Even within specialty areas, some CNCs had a clearly defined and unique practice role. For example, in one disease specific department with three CNC positions each had the same title although one was almost entirely devoted to performing diagnostic testing (but not ordering it); another worked exclusively in the team providing a narrow specialist treatment; and the third was almost exclusively focused on research.

*Clinical focus*

The third theme distinguished between different CNC roles in relation to their *clinical focus*. The differences in clinical workload primarily related to whether or not the department offered outpatient clinics. Whilst CNCs in some roles (e.g. diagnostics) may spend much of their time on clinical activities and patient/family engagement, CNCs in other roles (e.g. nursing research and practice) may spend little time with patients and families.

*Setting*

The fourth theme that differentiated CNC roles was identified from the way in which CNCs perceived their role as extending across the Hospital and/or into the community or, in other words, the *setting* in which they work. For some participants, significant involvement in a number of wards and departments during the working week was common. In contrast, others left their wards and departments on only a handful of occasions across the week.

The themes *interprofessional*, *role focus*, *clinical focus* and *setting* distinguished and differentiated CNC roles. The developed typology is based on these themes enabling the conceptualisation and characterisation of four CNC role categorisations. The developed CNC typology includes: Sole Practitioner, Clinic Coordinator, Clinical Team Coordinator and Clinical Leader (Table 5).

**INSERT TABLE 5 HERE**

The typology enables CNC positions to be differentiated according to different categories of CNC roles based on work patterns and activities. For instance, *Clinical Leader* *CNCs* interacted with fewer patients and families than *Clinic Coordinator* *CNCs*. A *Sole Practitioner CNC* typically functions at a more independent level than a *Clinical Team Coordinator CNC*. In terms of specialisation, a *Clinical Leader* CNC may function over a broader range of areas than, say, a *Clinic Coordinator* CNC, whilst a *Clinical Team Coordinator* CNC tends to have a narrower focus but may provide services across a broader range of settings than other CNCs. In contrast, the *Clinic Coordinator CNC* tends to have a narrower role than the other categorisations of CNCs, with the bulk of his or her work occurring within the team and the unit rather than across a number of settings.

**Discussion**

The study has clearly articulated and defined the roles and activities of a cohort of CNCs, who are employed to perform advance practice nursing duties, in one hospital. The findings provide a rich description of how these nurses went about their daily roles and the nature of the activities that define their work patterns. The CNC typology provides insight and a means to differentiate between CNCs, and provides a conceptualisation of the CNC role in a way not previously reported. The study identified a number of themes that can be used to more richly explain the way that these nurses work. It has exposed role categories that are similar to that reported by others who have reviewed the roles of APNs in other settings, and, in this way, gives additional weight to the body of evidence on the role of APNs generally.

The typology that has been developed and presented in this study to describe the CNCs examined in this study is similar to the categorisation of APNs roles reported by other researchers ([Ellis & Morrison 2010](#_ENREF_14); [Ketefian et al. 2001](#_ENREF_20)). For example, Miles ([2011](#_ENREF_23)) described how some APNs work as *sole practitioners*, who have a significant degree of autonomy in their clinical assessment, treatment and management of patients, as do some CNCs in this study.

Morse ([2001](#_ENREF_24)) described a *co-ordinator of clinical care* role, where APNs are typically responsible for the functioning and co-ordination of specialist outpatient clinics and Chan ([2009](#_ENREF_7)) and co-workers reported on the use of a gastrointestinal APN to run outpatient clinics providing follow-up care and information to patients who had received a gastroscopy; similar roles to the Clinic Coordinator CNC category described here. In Australia, other nurses have been reported working as APNs in the capacity of a *Co-ordinator of the Clinical Team*. For example, a hospital in Melbourne introduced an APN clinical co-ordinator role to manage their Rapid Assessment Medical Unit ([Sinclair et al. 2003](#_ENREF_33)). This nurse was involved in coordinating a multidisciplinary team thereby ensuring health assessment, patient care and discharge planning were communicated to the relevant health practitioners ([Sinclair, Boyd & Sinnott 2003](#_ENREF_33)). In this example, the APN was much more involved in team work and collaborative care than, for example, the *sole practitioner*.

*Clinical leader* APN roles are also evident in the literature. The focus of this role is on research rather than direct patient care, and facilitating and promoting the use of evidence-based practice to inform the way in which other nurses work. Currey, Considine and Khaw ([2011](#_ENREF_10)) described APN roles exclusively devoted to research and argue for the creation of specialist clinical nurse research consultants. In addition, Schramp and colleagues ([2010](#_ENREF_31)) support this specialist research role and have described the positive outcomes from adding an APN to a clinical research team.

Although the studies cited above have tended to describe a single categorisation of role for APNs, rather than describe the full range of APN roles, similar work to this study has been reported by Sidani and colleagues ([2000](#_ENREF_32)), who studied nurse practitioners in acute care settings in Canada. The list of activities described here that the CNCs undertake is similar to the range of NP activities described by Sidani. However, it should be noted that nurse practitioners can independently prescribe and order diagnostic tests, whereas CNCs cannot.

The typology identified may not fit all CNCs across NSW or Australia, and it is not argued that it will fit all APNs; what it does do is to categorise different CNC roles within the hospital studied. There is little doubt the CNC roles in this study are complex and involve diverse activities; yet the typology would appear well supported by previous research into the roles of APNs. The typology developed may be useful for understanding the roles of CNCs in other hospitals in NSW, other health services in Australian and APNs elsewhere, which, as the literature has suggested, may be quite diverse ([Ketefian et al. 2001](#_ENREF_20)). On the other hand, the current study demonstrates that there remain considerable differences between the scope of practice of different CNCs and how the roles and responsibilities are enacted. This may raise the question for some as to whether this diversity is desirable.

CNCs were introduced into NSW hospitals by the establishment of new, additional nursing positions. The nurses eligible to be appointed to these positions were those with advanced knowledge and clinical skills and are expected to practice with a relatively high level of autonomy. CNCs were awarded a higher salary compared with registered nurses and were intended to be a vital component of the healthcare workforce. It is because of this special contribution, and their additional cost to the health system, that it is important to develop a clear understanding of their work patterns and activities. A clearer understanding of what they do will assist employers, and colleagues, to make adequate use of their expertise. This paper adds a new dimension to the way in which the work of CNCs (and possibly other APNs) can be conceptualised.

Different groups support increasing the number of, and expanding the role of, APNs to meet increased care demands ([American College of Surgeons 2011](#_ENREF_2); [Sargen, Hooker & Cooper 2011](#_ENREF_30)), but this expansion should be based on a clear understanding of the roles that APNs need to provide to meet this demand, and whether what is required is the appropriate role for an APN. This study suggests that there are a range of roles across the nurses employed as CNCs and that some of these roles may not be appropriate for this category of APN. For example, a small number of CNCs identified in this study appear to operate more like a research manager or senior specialist registered nurse and a definitive judgement of the appropriate classification of individual CNCs would require a more detailed approach than is possible with the aggregated data reported in this paper. Furthermore, while this paper has described and categorised the roles and activities of the participants in this study they are described in broad terms only and, while these descriptors will be useful, on their own they are limited in application in other settings and for determining if individual roles appropriately fit the classification of a CNC, or other APN role for that matter. Further research is needed, based on the typology described here, to develop a validated tool that can be used across different settings to assess the functioning of an individual APN for the purposes of guiding them and their supervisors as to the level of advance practice at which they are working.

There are several limitations that should be considered when examining the broader significance of the results reported in this paper. First, the research was restricted to a single tertiary referral hospital with a small CNC sample size (n=56). Whilst the study results provide information about the different ways in which CNCs perform their roles and responsibilities, multi-centre studies are needed to determine whether the CNC typology is relevant for other settings. Second, the analyst-constructed typology was based on survey and interview data, and not validated with on-site observations or clarification with supervisors or peers for individual CNCs. Third, secondary data sources to confirm findings were not used. Further evidence in the form of statistical collections, daily diaries, observations or third party interviews would have added rigor to the findings. Finally, there was no attempt to determine whether the typology is appropriate for nurses occupying similar APN positions in other locations both in Australia and internationally, and for describing non-APN nursing roles and positions.

In preparing this paper, the researchers accepted that all the nurses interviewed in this study had been appointed as CNCs and performed at their grade within the hospital. It was noted that 35% of the nurses surveyed did not have post graduate qualifications and it is assumed they were appointed to the advance practice role because of their experience. No attempt was made to assess if any of the CNCs participating in the study were functioning at a higher or lower level of practice than their appointed position. Nevertheless, the identification of the different ways in which these CNCs were undertaking their roles suggests significant diversity. While this paper does not attempt to address this question further testing of the CNC typology at other sites, as well as other APN roles could help to clarify role diversity requirements.

**Conclusion**

The findings of this research provide a rich description of the CNC role; a recognised and formal APN role in Australia. The typology identified can be used to explain the way that this group of CNCs work. Further testing is required of the typology to determine if the conceptualisation resonates with other CNCs and their everyday practice. While a number of studies into the role of APNs have focused on the scope of practice, the roles and responsibilities of APNs, this paper adds to that knowledge by describing how a cohort of APNs in one major hospital perform their roles and provides a typology to describe the different ways in which APN role can be performed.

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