The M-Strong APN Model as an effective framework for registered nurse training in tissue viability: An interpretative phenomenological analysis

Upton D, Alexander R, Upton P, Upton R & Dunk AM

ABSTRACT

Advanced practice nursing (APN) has increased internationally in scope and profile with changing health care needs. In Australia, ambiguity remains around role delineation and the nature of APN for registered nurses (RNs). The M-Strong APN Model has been suggested as a useful framework for articulating the nature of APN and the contribution of RNs to health care settings. This study investigated the efficacy of the model as a framework for an innovative professional development program in tissue viability at the Canberra Hospital. RNs who had completed the training program (n=5) participated in a focus group and responses were analysed using interpretative phenomenology. This analysis revealed 22 themes, 16 of which were mapped across the five M-Strong APN domains (*Direct comprehensive care*, *Support of systems*, *Education*, *Research, Publication and professional leadership*). The remaining themes were grouped into two further domains: "The program" and "Support for professional development". The M-Strong APN Model was found to be a useful tool for RN training development and implementation. However, discrepancy existed between the M-Strong Model's goals and complete realisation of its domains of practice in day-to-day activity, suggesting further attention must be paid to providing support and appropriate opportunity for RNs to fully achieve the model's aspirations for APN.

Dominic Upton *
PhD, FBPsS
Deputy Dean, Education
University of Canberra, ACT, 2601
Tel: +61 (2) 6206 8709 Fax: + 61 (2) 6201 5999
Email: dominic.upton@canberra.edu.au

Rebecca Alexander
BScPsy (Hons)
Research Assistant, School of Applied Psychology
University of Canberra, ACT, 2601
Email: rebecca.alexander@canberra.edu.au

Penney Upton
University of Canberra, ACT, 2601
Email: penney.upton@canberra.edu.au

Roseanna Upton
City University, London, UK
Email: Roseanna.upton@gmail.com

Ann Marie Dunk
The Canberra Hospital, Canberra, ACT
Email: AnnMarie.dunk@act.gov.au

* *Corresponding author*

BACKGROUND

The progression of advanced practice nursing (APN) has come about in response to the need for flexible service delivery in a dynamic and changing health care environment[1]. The wealth of literature relating to APN signifies the importance of these services in contemporary health settings[2,3]. An Organisation for Economic Co-operation and Development (OECD) working paper identified four factors that have contributed to the development and establishment of APN roles internationally, including: improving access to care; promoting higher quality care; constraining growing health care costs; and offering career advancement opportunities to nurses[4].

APN has been associated in the literature with significant improvements in patient outcomes (that is, health status and behaviours) and quality of care[2,5-10]. Indeed, APN has been labelled the 'sleeping giant' of health care systems internationally[11]. Yet the capacity to unleash this 'giant' remains hampered by substantial ambiguity about what competencies and practices constitute APN and how these roles should be delineated in the relevant professional terminology[1,12,13]. The Nurse Practitioner/Advanced Practice Nursing Network (INP/APNN) of the International Council of Nurses (ICN) conducted a survey of 18 countries and identified 14 professional titles that designated advanced practice roles, with great variation in the related educational and practice requirements required for these roles[11]. The OECD report on APN also highlighted the complexity of context and disparity of practices associated with these[14] roles across 12 developed nations[4]. Clarification and consensus around APN and

Figure 1: IPA themes mapped against the five M-Strong APN domains

		M-Strong APN domains				
(1) The program	**(2) Support for professional development**	**(3) Direct comprehensive care**	**(4) Support of systems**	**(5) Education**	**(6) Research**	**(7) Publication and professional leadership**
1.1 Evolutionary program structure	2.1 Relationships	3.1 Advancing professional practice	4.1 Professional integrity	5.1 Education and mentoring	6.1 Research commitment	7.1 Changing role
1.2 Specialist learning	2.2 Developing support networks	3.2 Patient focus	4.2 Instigating change	5.2 Recognition of expertise	6.2 Research-led practice	7.2 Career advancement
1.3 Practice framework.	2.3 Continuing professional development		4.3 Collaborative leadership	5.3 Communication	6.3 Implementing research	
			4.4 Innovation	5.4 Change in focus		
			4.5 Professional achievement			

associated terminology, definitions, educational expectations and regulation is pivotal for the successful deployment of these roles in primary health care and hospital settings internationally[12].

M-STRONG APN MODEL: A FRAMEWORK FOR DELINEATING JOB FUNCTION

The M-Strong Model is a research-based framework encapsulating domains of practice that comprise APN activities[14-18]. The model consists of five practice domains spanning: (1) Direct comprehensive care (for example, activities related to patients such as assessments, procedures, data analysis, physical care and counselling); (2) Support of systems (for example, instigating change and innovative patient care, consultation and role advocacy); (3) Education (for example, relaying best practice information to patients, caregivers and health care colleagues); (4) Research (for example, supporting research activities and integration of research into practice, contributing to research activities); and (5) Publication and professional leadership (for example, disseminating knowledge and expertise beyond the immediate setting into the wider public and professional spheres)[1,14].

The M-Strong Model has been used in Australia to assist in delineating APN job function in nursing roles. Gardner and colleagues assessed the nature of advanced practice activities across the Queensland nursing classification system[1]. They found the greatest amount of APN activity as defined by the M-Strong Model was undertaken by nurses working at Grade 7 in the system (that is, clinical nurse/midwife; clinical nurse consultant, nurse/midwife unit manager; nurse/midwife manager; nurse/midwife educator; nurse researcher; public health nurse; nurse practitioner candidate). They also found that the strongest predictor for M-Strong APN activity was working in a Grade 7 role with higher levels of education. The researchers surmised that the M-Strong Model offered a useful framework for characterising APN job function, and recommended the use of the M-Strong APN Model for job design, career and education planning in health care settings[1].

DEVELOPING EFFECTIVE RN TRAINING USING THE M-STRONG MODEL OF APN

The research literature in Australia and internationally has called for better job design and consistency of training for RN roles[14,16,19]. The M-Strong Model of APN provides a validated research-based framework from which to enable this design and consistency[20,21]. Using this evidence as a springboard, the Canberra Hospital's Tissue Viability Unit (TVU) has established a professional development program using the foundations of the APN utilising the M-Strong Model as a framework for RN training. This innovative program is the first of its kind in Australia and is pioneering APN foundations for practice in wound care. This interpretative phenomenological study aimed to evaluate the efficacy of using the M-Strong Model as a framework for the TVU's professional development program, and explore participating nurses' experiences of the program and the model on which it was based.

METHOD

Design and analysis

An interpretative phenomenological study was undertaken using semi-structured interviews in a focus group format. A thematic phenomenological analysis was conducted in three stages using data from interview transcriptions[22]. The first analysis assessed the interview transcript for key issues. The second analysis grouped these issues into broad themes. The third analysis mapped the themes across the five M-Strong APN domains (*Direct comprehensive care*,

Support of systems, *Education, Research*, *Publication and Professional leadership*).

Participants

Participants were five (n=5) registered nurses (RNs) employed at the Canberra Hospital who had completed the TVU's APN professional development program ("the program"). At the time of interview, "the program" had been in operation over a series of five iterations and the RNs participating in this study represented different iterations of "the program." Of the total number, n=1 RN had completed iteration one; n=1 RN had completed iteration two; n=2 RNs had undertaken iteration three, and n=1 RN had undertaken iteration four. The fifth iteration of "the program" was in operation at the time of data collection.

Procedure

RNs were canvassed for their ideas and experiences in "the program" via semi-structured interview in a focus group format. The interview question flow was designed prior to the focus group and included eight open-ended questions designed to tap participants' experiences of "the program" and engagement with the M-Strong APN Model on which "the program" was based. Focus group questions were divided across the broad themes *engagement* (that is, aimed at relaxing participants and initiating conversation), *exploration* (that is, investigating participants' perceptions and opinions), and *exit* (that is, wrapping up and final thoughts). The focus group was conducted on-site at the Canberra Hospital and audio-recorded for transcription purposes. Participants were provided with an information sheet detailing the nature of the study and provided written consent prior to participating. Following the focus group, a transcription of the interview was prepared for analysis. Participants were able to view the written transcript if they wished.

Ethics approval

The study received ethics approval from the ACT Health Human Research Ethics Committee (Low Risk Subcommittee) and the University of Canberra Human Research Ethics Committee.

RESULTS

Phenomenological analysis

An interpretative phenomenological analysis (IPA) of the open-ended data from the focus group was undertaken. This analysis revealed 22 themes, 16 of which were mapped across the M-Strong APN domains, as can be seen in Figure 1. The remaining themes were grouped into two further domains: "The program" and "Support for professional development".

Domain 1: "The program"

(1.1) Evolutionary program structure

RNs emphasised the generational and evolutionary nature of "the program" throughout the focus groups. Participants who had undertaken earlier iterations of "the program" mentioned challenges to systems set-up and resources. RNs from later iterations spoke highly of the structural support and resourcing that had been put into place across the various iterations of "the program":

> "Certainly, because I'm generation 4, we had a really well established office, really well established systems in place so and I think you guys [earlier cohorts] probably did a lot of the hard work to get those in place." (P2)

All respondents believed the 6-month duration of "the program" worked well as an introduction to the RN since:

> "… by the time you finished you felt comfortable and confident going out there." (P1)

(1.2) Specialist learning

Participants also drew attention to the unique experience of "the program," which allowed for intensive specialist learning in wound care, alongside broader hospital systems-based learning:

> "The great benefit, was being taken away from the ward area and being just immersed in that specialty. That was invaluable because you got to step, step out, and completely immerse yourself in those skills and see such a variety of — in this case wounds — that it expedited your learning. It challenged you, so, that was fantastic." (P4)

Participants emphasised the capacity for developing new skills through this approach and the changing nature of their role as health care providers. However, they also discussed the challenge of applying this learning in hospital settings where managerial support and opportunity were limited.

(1.3) Practice framework

Finally, the theme "Practice framework" captured RNs' commitment to the M-Strong Model as an effective APN framework; but also acknowledged that time constraints and organisational support did not allow for the complete realisation of the model in their daily professional lives.

Domain 2: Support for professional development

(2.1) Relationships

In discussing relationships, RNs noted that highlights of the program included the mentoring they received from the program leader, and the support and collegiality of colleagues on "the program". They also mentioned challenges with relationships, including issues communicating with management and co-workers who were not part of "the program" or privy to specialist wound care knowledge, and subsequent difficulties in changing day-to-day practice. The RNs were also keen to emphasise the value of the commitment and mentoring provided by "the program" leader who was described as:

> "… a real mentor; someone you aspire to turn into and [um] to know she's always around and I can ask her, really anything that is professionally related, its invaluable." (P3)

(2.2) Developing support networks

Participants referenced the value of debriefing with colleagues, and the informal support network of RNs growing across the hospital as "the program" evolved. They felt this support bolstered their capacity as instigators of change. They also focused on the importance of building a network of advanced nursing practitioners across the hospital to deliver excellence in clinical education and consultation:

> "You're growing, you know, a proportion of staff to go throughout the hospital. So it just creates a big network of people who support people." (P1)

(2.3) Continuing professional development

RNs highlighted the importance of ongoing professional development of staff to ensure quality care. This theme also reflected the aspirations of a number of RNs to further their education in either master's or PhD study:

> "For me it's, it's given me confidence to pursue further education, which I've always wanted to do in nursing." (P3)

One RN had already commenced PhD study as a consequence of her experience in "the program".

Domain 3: Direct comprehensive care

(3.1) Advancing professional practice

Throughout the focus group, participants reflected on changes to their professional practice, including a commitment to maintaining industry standards and professional integrity, to undertaking ongoing professional development, and to instigating evidence-based practice change. Participants mentioned heightened awareness of broader hospital systems, which allowed for better understanding of organisation procedural practices — for example, how keeping accurate patient records aids with assessment:

> "To then be able to see what is going on from higher up and then realise that they're actually important — they're not just a piece of paper — they are actually important, but actually do, do need to be done and do show important things." (P2)

However, there was some concern expressed with maintaining professional practice activities due to time constraints on the floor:

> "Going back to the ward is such a barrier as everyone is so busy — it's really hard prioritising that best practice." (P3)

(3.2) Patient focus

Participants revealed a change in practice emphasis to holistic patient care and wellness. RNs spoke of educating and involving the patient in treatment decisions, and the importance of assessing patient responses and adapting treatment plans to maximise patient outcomes. In particular, RNs emphasised the need to involve patients in treatment to improve outcomes, indicating that this was paramount to delivering quality care:

> "You've really got to get them on side, so it's really important that you give them the right information and let them contribute to their healing … as long as they've got the information to make their own decisions and then we found that there is a lot more wellness going into patient care. So we're looking at the patient and how does it affect them, not just the time they're in hospital, but when they go home until they're healed." (P5)

Domain 4: Support of systems

(4.1) Professional integrity

This theme captured an invigorated sense of professionalism post-training. The RNs believed that questioning practice was an essential part of delivering effective care and constant improvement and found it difficult to witness mismanagement of care and administration processes. However, they also felt more confident post-training to challenge colleagues about practices that did not align to their M-Strong APN ideals:

> "Yeah, well I think [um] probably my biggest barrier that I overcame in tissue viability was probably when I saw a practice — that I didn't agree with or that I knew was just wrong — just really against what I stood for, being able to communicate with that person in an appropriate way." (P3)

(4.2) Instigating change

This theme emphasised the RNs' awareness of the change process as gradual and dependent on their capacity to 'test the water' and bring colleagues with them through mentorship and education.

> "… having the confidence to bring other staff in and educate other staff around me and making sure because, you know, the more people that have that knowledge the better off the patient outcomes will be." (P5)

RNs also highlighted the need to learn from other RNs' experiences in the change process to see what worked and why. It also captured the focus RNs placed on their leadership role as change agents within the hospital, along with the frustration they felt when their capacity to influence change was stifled through lack of support in their unit.

(4.3) Collaborative leadership

The RNs revealed the importance of adopting a leadership style that was collaborative rather than authoritarian. Collaboration and consultation were seen as important components of their day-to-day practice change. They emphasised consultation with colleagues about direct care practices, as well as with management around systems change.

> "I find when you're positive, and proactive and helpful, people then ask you. So you're still on their level." (P3)

This linked very clearly into the need for mentorship and education to 'bring colleagues' with them through the change process. Participants also again emphasised that their capacity to act in

a leadership role was context-dependent and constrained by the support they received from management.

(4.4) Innovation

Participants talked about innovation in aspirational terms. However, they acknowledged limited time to undertake comprehensive review of systems or to keep up with current research. For instance, one RN mentioned a journal club she had tried to instigate, which had ceased due to time constraints.

(4.5) Professional achievement

This theme captured an issue which was raised throughout the interview process. Following training, the RNs reported having mixed opportunities to bring their learning to hospital settings outside the TVU. Some RNs reported a sense of professional achievement at bringing best practice change to wound care in their units, whilst others reported feeling frustrated that they had limited support and opportunity to instigate change:

> "When I did the discharge liaison role … it was just a little more difficult to implement some of the things I had learnt due to time constraints in that role because you've just got to, you know, bang, get them out. Whereas I thought I would be able to be more involved in their wound care on the day, that didn't just come." (P1)

Domain 5: Education

(5.1) Education and mentoring

The RNs highlighted their role in educating both patients and non-specialist colleagues in wound care as being a major focus of their work. In particular, the RNs stressed their new relationship to colleagues as mentors and educators. Furthermore, RNs emphasised that mentoring was a form of leadership. They spoke about educating colleagues in a positive and proactive way; suggesting possible approaches to wound care in a casual manner and using their expertise to inform best practice in their units:

> "I think the one that I can add maybe is the challenge of dealing with the medical staff, where it is a grey area, of observation. Doctors are giving orders and if they write an order that's what it is, but if the lack of knowledge is on their part — and sometimes nursing — on what product is best. That was a great challenge trying to suggest things in a tactful way without, I suppose, being disrespectful to their authority." (P4)

(5.2) Recognition of expertise

RNs emphasised their capacity to provide expert advice and consultation on wound care, and felt this new expertise was valued and respected by colleagues and senior staff at the hospital. Furthermore, this feeling of respect from colleagues when the RN took a leadership role led in turn to feelings of professional pride:

> "So after I finished tissue viability I moved wards and so I came on the ward and the CNC went, 'P2 is joining us today, she has just come from tissue viability, she's our new pressure injury champion, if you have any questions about skin or wounds go to her', it was like 'Oh okay! Okay!' It was really validating." (P2)

(5.3) Communication

This theme captured the RNs' focus on streamlined 'top-down' and 'bottom-up' communication between hospital staff and management as an important outcome measure:

> "There is recognition that you need to appreciate and respect your colleagues at different levels within the system to make it work as a team." (P4)

(5.4) Change in focus

Finally this theme emphasised the professional change each RN experienced from a clinical to an educational focus as a result of APN training:

> "When I came back [to the ward], people seemed to really … they were really looking to you for advice, and I really enjoyed it 'cause I really felt like my place was there and I was happy to disperse knowledge." (P3)

They reflected on seeing new pathways available to them professionally, and were drawn to more senior roles that drew on their expertise.

Domain 6: Research

(6.1) Research commitment

This theme spoke to a developing awareness in the RNs of the wound care literature and the importance of applying research-based interventions to improve patient outcomes.

> "There's a lot of — you know, you ask people what to do here and they go, 'ah, do that' and then with this program, you know, you question it — you really learn to question things. And then you're looking at a research paper or best practice implementations and then you're thinking, 'Yeah, actually there is something in this'. I mean I really like the way I feel when I know I've given my patient — not just the best care I can — but also the most up-to-date, evidence-based care." (P3)

(6.2) Research-led practice

RNs also emphasised their view that hospital decision-making and care practices should be centred on current best practice research.

> "Tissue viability showed me importance of you can't just educate without knowing your research with it. [Um], so you can at least have rationales as to why, and implementing best practice, and staying current." (P4)

(6.3) Implementing research

Participants talked about implementing research in aspirational terms. However, they acknowledged limited time to undertake

a comprehensive review of systems or to keep up with current research. For instance, one RN mentioned a journal club she had tried to instigate, which had ceased due to time constraints.

Domain 7: Publication and professional leadership

(7.1) Changing role

RNs expressed a sense of broadened perspective professionally and aspiration as change agents in clinical settings. For example, participants talked about the importance of taking on a new leadership role and working to initiate changes in practice through consultation and wound care expertise:

> "I suppose something I've gained from tissue viability that I didn't expect to see in myself beforehand was probably more of the leadership type development, and I think my role and my relationship with other nurses has been one of, yeah, I'm not just coming to do the best by my patient which is your motive as a nurse, but my motive is to share knowledge like I've received …" (P4)

(7.2) Career advancement

RNs also spoke about being restless for new challenges following their training in tissue viability. "The program" had opened up new opportunities to them for career advancement and an awareness of new roles (for example, in research and education). However, one RN also spoke about feeling a sense of dissatisfaction in terms of career advancement, as the environments she had worked in post-training had not been supportive of her putting her APN learning into practice:

> "One place I worked … some of the staff had been there a long time who did the wound care. I knew it was difficult to try and update them and suggest better ways because they'd be like, 'this is what we do." (P1)

DISCUSSION

This study considered whether the M-Strong APN Model acted as an efficient framework for an innovative professional development program in tissue viability. RNs provided their insights about "the program" and the framework on which it was based, and discussed ways in which their APN training had informed daily practice and professional relationships. In reflecting on the benefits and challenges of "the program", participants mentioned the importance of quality mentoring, intensive training, and commitment from the program leader. However, they also noted challenges in establishing such a professional development opportunity. RNs from earlier iterations of "the program" highlighted concerns with initial set-up and resourcing. While these issues were worked out across later iterations of the program, it was apparent that building such a professional development opportunity was a dynamic and iterative process, reliant on support from senior management.

Participants believed that the skills and knowledge they built on "the program" had influenced their daily practice. They noted changes across all M-Strong APN domains (see Figure 1), including increased consultation with colleagues, a greater emphasis on maintaining industry standards, and a change in focus to holistic patient care. The RNs particularly mentioned their role as informal educators of patients and colleagues around best practice in wound care, grounded in their own developing awareness of the research literature. In addition to changes in their own practice, participants felt their relationships to colleagues had also changed. These changes mapped across all M-Strong APN domains except *Research*. Responses revealed that the intensive training "the program" offered in tissue viability had increased RNs' confidence and expertise in the field. They believed this expertise was valued by colleagues, with whom they worked to initiate changes in practice through consultation and informal leadership activities. Again, the RNs stressed their role as educators in best practice wound care. They emphasised a renewed sense of professional integrity and were more willing to challenge practice when they witnessed mismanagement.

In reflecting on the challenge of changing daily practices, participants were focused on the iterative nature of change, principally in the M-Strong domains of *Direct comprehensive care* and *Support of systems*. They highlighted the need to bring colleagues with the change process through mentoring and education. However, they also stressed that the opportunity to instigate change was context-dependent. Where they had support from senior management and opportunity to do so, RNs brought expertise in wound care and changes to practice, reporting a sense of professional achievement in their influence. In circumstances where support and opportunity were limited, they reported a sense of frustration at not being able to bring their training in patient care and practice to realisation.

In considering factors that influenced hospital service delivery, RNs touched on themes across all M-Strong APN domains, except *Publication and professional research*. In particular, they highlighted the need to involve the patient in treatment decisions and to flexibly respond to their needs. They also mentioned the importance of the relationship between hospital management and senior staff. RNs felt it was important they had the opportunity to question practices, and that in order for this to occur, top-down and bottom-up communication between management and staff needed to be open and responsive. Participants drew attention to the need for research-led practice to ensure quality care, but acknowledged time constraints on the floor made it challenging to keep up to date with the literature. They also expressed the importance of ongoing professional development opportunities for staff to ensure quality service delivery.

Informal leadership was an important aspect of daily practice for the RNs. They focused on the sense of professional pride they felt in having expertise in wound care, which touched on skills relevant to the *Direct comprehensive care* domain. They also evidenced an aspiration to instigate change in their units as a *Support of systems* initiative. The RNs believed mentoring colleagues in a low-key manner was the most useful leadership mechanism they adopted, and highlighted the importance of a non-authoritarian leadership style to win colleagues over. Their leadership experiences and emphasis on mentoring mapped across the *Education* domain.

In reflecting directly on the M-Strong APN domains, participants acknowledged the majority of their time was spent in *Direct comprehensive care* activities. Direct patient care and administration were very time-consuming and prohibited more expansive development of other domains. These findings are indicative of other studies which found that patient care and administration take up a large proportion of senior nursing staff time[16]. The current participants, however, also emphasised the importance of consultation in trying to instigate change (*Support of systems*) and their roles as educators in wound care (*Education*)[14]. RNs also displayed a commitment to and awareness of the importance of research-led practice (*Research*), but acknowledged time limitations prevented them following through on their commitment.

Finally, participants reported a change of focus in their professional aspirations as a consequence of their APN training. Their focus had shifted from purely clinical roles to educational and research-based roles, with a number of RNs already enrolled or intending to undertake higher education. These themes mapped across the *Direct comprehensive care*, *Education* and *Research* domains of the M-Strong Model. Experience on "the program" had led participants to a greater awareness of the diversity of roles and professional opportunities available to them.

In conclusion, analysis of responses from participants in this study indicated that the M-Strong Model of APN was an effective framework with which to underpin this innovative professional development program for RNs in tissue viability. In particular, it offers a framework in which professional development can occur within a hospital setting. Participants were conscious of the five M-Strong domains and able to articulate the aspirations for APN that are outlined within the model. However, their capacity to realise the M-Strong domains in full was very much context-dependent. Direct patient care, time constraints, lack of management support and opportunity made it difficult for RNs to operate within the *Support of systems*, *Education* and *Research* domains. Not surprisingly, focus on the *Publication and professional leadership* domain of the M-Strong Model was minimal. Participants were most focused on trying to impact their direct environments, rather than influencing the wider professional and public spheres as reflected in this domain of practice. While the M-Strong APN Model is a useful tool for training development and implementation, there remain significant issues in realising its day-to-day aspirations for RNs. Nevertheless, the model offers a first step towards more clearly defining the nature of the RN role within a hospital setting and articulating the value of this role to quality care and patient outcomes.

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