



CRITICAL REFLECTION ON PRACTICE DEVELOPMENT

The nursing professorial unit: translating acute and critical care nursing research

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Received for publication: 30th January 2017

Accepted for publication: 5th April 2017

Published: 15th November 2017

<https://doi.org/10.19043/ipdj.72.009>

Abstract

Background and context: Implementation of current research in practice is challenging for ward-based nursing staff. However, university-based nursing academics are seen as the research experts and are perhaps well placed to support clinical nursing research. The problem lies with the divide between practice and academia; universities often use the clinical environment as the place to conduct research but this is often not translated effectively into practice. The development of a nursing professorial unit for acute and critical care was undertaken to meet this challenge. The unit's key aim is to develop, mentor and support a nursing research culture that is wholly situated within and driven by the requirements of the clinical environment.

Aim: The aim of this article is to offer some insights as to how staff set about engaging with and developing the nursing professorial unit to support nursing research in our local hospital.

Conclusions: The article highlights how an effective and coordinated approach to supporting clinical nursing research is possible. The nursing professorial unit has been successful in bridging the divide between academia and practice by using a non-university approach to supporting nursing research. Instead we have adopted the philosophy that practice is the sole driver for research and as academics our role is to support that position.

Implications for practice:

- The adoption of the nursing professorial unit model for supporting clinical nursing research is beneficial in closing the divide between clinical practice and the university
- The continual presence of the academics in the clinical environment has had a positive impact on research development and implementation in practice
- The nursing professorial unit has become an integral part of the nursing culture in the hospital environment

Keywords: Practice development, nursing research unit, translational nursing research, professorial unit

Introduction

Translating nursing research into practice is often fraught with challenges. Given the time pressures facing clinically based nursing staff and their possible lack of experience in interpreting and implementing research, entrenched and traditional ways of providing patient care can be difficult to change (Brooks and Brown, 2002; Wolf, 2014; Hutchinson and Jackson, 2016). On the other hand, seeking research expertise in the form of university-based nursing academics or nurse researchers frequently has cost implications (D'Este and Perkmann, 2010) or involves considerable time spent chasing ever-dwindling research grant income.

In addition, criteria for the allocation of clinical research monies, notably in the Australian context, have been transformed dramatically to include evidence of community engagement. In fact, nearly 50% of government research grant money now has to be attributed to projects/research that involve community/industry partners (Australian Government, 2003). This has huge implications for universities, who have typically used industry sites as a means of undertaking programmes of research for their own benefit – what Hastings et al. (2012, p 149) refer to as ‘bedside to the academic bookshelf’.

It is outside the scope of this article of course to discuss the merits, challenges or difficulties associated with broader implementation of nursing research; instead it will focus on the development of a nursing professorial unit (NPU) as part of an ongoing collaborative partnership between the healthcare sector and the university. In particular it will discuss the aim, function and outcomes of our unit as a model to address some of the issues associated with creating a translational nursing research culture in the hospital environment, as well as a model to encapsulate the meaning of such collaborative partnerships.

Background

Collaborative partnerships between hospitals and universities are not new, although they have been given different names: practice development units (Gerrish, 2001; Fielding et al., 2007; Conway et al., 2010); nursing research councils (Ravert and Merrill, 2008); research alliances (Caramanica et al., 2002); and nursing research units (Appleton et al., 2010). Semantics aside, the important work undertaken by these partnerships is the implementation of evidence-based research currently being undertaken and the promotion of a nursing research environment whose core aim is to optimise patient care. Most use a mixture of clinical education, clinical research, clinical audit or quality improvement initiatives to develop an evidence base of nursing practice. It could even be suggested that such work is espoused within the practice development framework itself, a framework that is best encapsulated by the following definition:

‘Practice development is a continuous process of developing person-centred cultures. It is enabled by facilitators who authentically engage with individuals and teams to blend personal qualities and creative imagination with practice skills and practice wisdom. The learning that occurs brings about transformations of individual and team practices. This is sustained by embedding both processes and outcomes in corporate strategy’ (Manley et al., 2008, p 9).

It is evident from this definition that the purpose of practice development is to improve the effectiveness and efficiency of patient care by contextually transforming the culture of care (Manley and McCormack, 2008) and to support the development of an evidence base of care and care delivery.

Defining translational research

Defining translational nursing research is not without its own challenges. The notion of translational research possibly has its foundations in the 1960s, when the term was used exclusively in relation to adapting scientific discoveries to clinical practice – bench to bedside, mainly with an oncology focus (Wendler et al., 2013). More recently, the definition has taken on a broader focus to encompass not

only basic laboratory-type research, but research that has a clinical focus (Rubio et al., 2010). Others (Lean et al., 2008; Bell et al., 2011) have included the notion that translational research is also espoused in population/epidemiological research, which suggests that it is multidirectional. It was decided that the best approach in the context of the NPU was to adopt the definition provided by Wendler et al. (2013, p 223):

‘Translational research (TR) is feasible scientific enquiry that tests the implementation of evidence-based interventions at the organisational and/or individual level, measuring implementation uptake. TR is complex, context specific, dynamic and unfolds in the pragmatic real world of clinical practice. Interdisciplinary in nature, TR requires communication and collaboration between and among researchers and clinicians. TR is framed theoretically and is process and outcome driven.’

Given the nature of what we were trying to achieve with the NPU, this definition was fitting, particularly when combined with a practice development framework to support and implement nursing research at the hospital. We did consider others, such as those of Rubio et al. (2010) and Bell et al. (2011), but felt they were similar in their approach, which was to promote transdisciplinary research by producing or transforming research evidence for specific clinical contexts.

Development of the nursing professorial unit for acute and critical care

The development of the NPU was seen as a departure from the tried and tested approaches as a means of promoting a collaborative partnership supported by the principles of practice development (Manley et al., 2008; Table 1). Other similar university-based NPUs may be structured differently in terms of the work they undertake – for example, being centres of excellence in wound care or pain management. Our NPU has a focus on the advancement of acute and critical care nursing practice, with the main research driver being the hospital itself. We chose this approach because of the need to promote a truly collaborative research partnership between both organisations; typically with university-hospital engagements the research to be undertaken is dictated by the university (D’Este and Perkmann, 2010; Hughes and Kitson, 2012).

We hoped in some small way to address this imbalance by focusing on a translational approach to clinical nursing research. Initially we considered using Lancaster’s (1985) six Cs of collaborative research (contribution, communication, commitment, compatibility, consensus, credit) as our theoretical framework. We even considered Swanson’s (1991) middle range theory of caring as a basis for the unit’s work, before selecting the collaborative model of Caramanica et al. (2002) alongside the principles of practice development. We agreed that the six Cs were what we would do normally in the process of our collaborative work and that Swanson’s model was more in line with the delivery of nursing care despite having aspects that overlapped with the NPU’s remit, such as partnership working and supporting nurses in the dissemination of nursing research. The attraction of Caramanica et al.’s model was that its aims coincided with the principles of the NPU:

- Expanding the evidence base of nursing practice to improve patient care
- Fostering ongoing collaboration and education in nursing research
- Creating a culture that promotes nurse-led research projects
- Promoting the translation of nursing research into clinical practice and education
- Promote the dissemination of an evidence base of nursing care

From this we were able to identify a core aim for the NPU: *the professional development of nursing practice through active engagement in evidence-based clinical practice, education and research.*

Table 1: Principles of practice development (Manley et al., 2008)

Principle 1	PD aims to achieve person-centred and evidence-based care that is manifested through human flourishing and a workplace culture of effectiveness in all healthcare settings and situations
Principle 2	It directs its attention at the micro-systems level – the level at which most healthcare is experienced and provided, but requires coherent support from interrelated mezzo and macro-systems levels
Principle 3	It integrates work-based learning with its focus on active learning and formal systems for enabling learning in the workplace to transform care
Principle 4	It integrates and enables both the development of evidence from practice and the use of evidence in practice
Principle 5	It integrates creativity with cognition in order to blend mind, heart and soul energies, enabling practitioners to free their thinking and allow opportunities for human-flourishing to emerge
Principle 6	It is a complex methodology that can be used across healthcare teams and interfaces to involve all internal and external stakeholders
Principle 7	It uses key methods that are utilised according to the methodological principles being operationalised and the contextual characteristics of the PD programme of work
Principle 8	It is associated with a set of processes including skilled facilitation that can be translated into a specific skill-set required as near to the interface of care as possible
Principle 9	It integrates evaluation approaches that are always inclusive, participative and collaborative

Building collaborations and building the NPU team

As its name suggests, the NPU is led and directed by a member of the university's nursing professorate, who has the relevant expertise in undertaking, evaluating and translating clinical nursing research, including clinical audit and quality improvement initiatives. Academic membership of the unit was not overly selective because of the small number of health faculty academics based at our regional campus. There were three academics in total so we felt we were in a position to cover most aspects of the research that was going to be directed towards the NPU. The team included a bioscientist (JC) who had teaching and learning as her programme of research, but with the added advantage of being an expert in pathophysiology education. This meant she was in a position to support teaching and learning research not only at undergraduate level but also at post-registration and postgraduate level. The second member was a nurse/midwife who led child and maternal health research, with a similar level of background knowledge and expertise to our bioscientist. The third member was the associate professor and academic lead for nursing at the campus (MC), who had extensive clinical and educational experience, and expertise in critical care nursing practice and research. Other members of the team included a health subject librarian, a statistician and a research assistant.

We felt, like Gardener and Woollett (2006) and Jackson et al. (2014), that in the changing climate of the clinical environment, priorities such as developing clinical leadership and implementing healthcare reforms are becoming important indicators of care delivery and patient outcomes. Care delivery has been instrumental in influencing health outcomes and we were confident the NPU would be well positioned to support innovation and leadership for the following reasons: first, nurses are the major providers of care within the hospital environment; second, the nature of their job means nurses have high levels of patient and/or family interactions; and third, nursing care can be directly related to patient outcomes and the quality of the patient experience (Aitken, 2001; Kramer et al., 2007).

At the time there was little formal collaboration between the university and the hospital in terms of supporting education and research. Therefore initial consultation was made by the unit lead (MC) through the hospital's director and assistant director of nursing. They were given an overview of the concept as well as an explanation of how the partnership could promote nursing research in the hospital, help achieve its strategic plan for nursing and build capacity in the nursing team (Table 2).

Table 2: A model to promote research engagement and develop capacity building

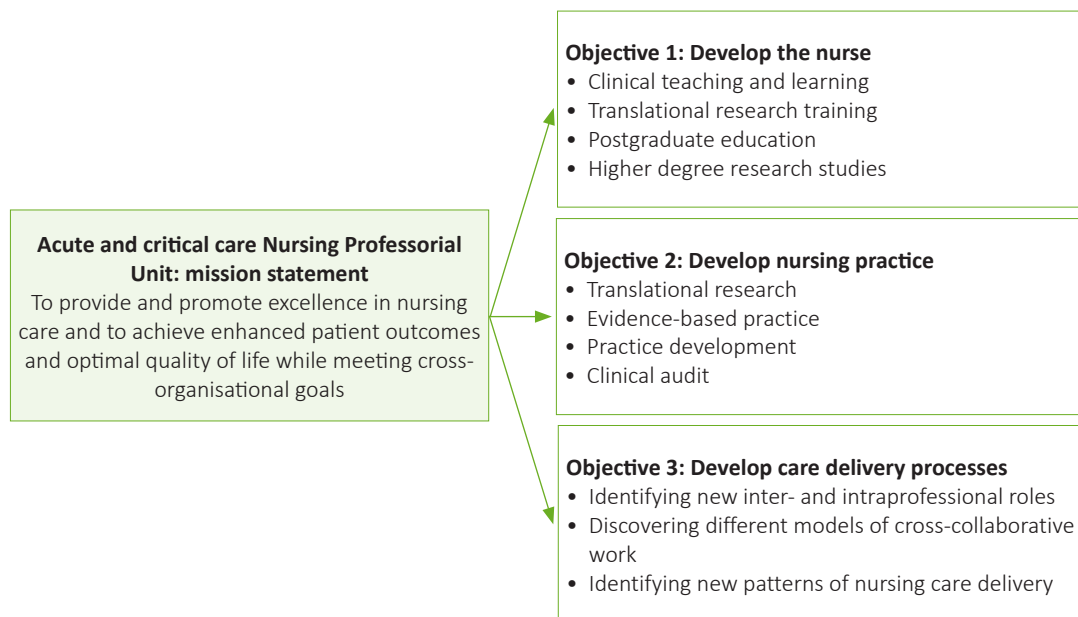
Nursing professorial unit for acute and critical care		
Academic leadership	Leading key healthcare reforms Leading innovation in nursing practice	<ul style="list-style-type: none"> • Developing service processes by establishing a testbed for new ideas and approaches to health and patient care delivery within a nursing context • Develop an active acute and critical care nursing translational research culture within the hospital • Support, promote and develop collaborative events that showcase the successes and innovations of this partnership to the local and wider community • Develop and promote nurse-led research nationally and internationally • Promote nursing leadership in translational research across all levels of the nursing team • Develop research and practice development skills of acute and critical care nurses • Create opportunities for inter- and intraprofessional collaborative translational research projects • Provide assistance and support for grant applications • Provide high-level mentorship and supervision for acute and critical care nurses undertaking tertiary studies and higher degree research projects
Clinical nursing leadership		
Clinical nursing practice		

Thereafter a number of meetings were held with the senior nursing team, the clinical nurse educators and the nurse unit managers to explain the aims of the NPU to develop and support a nursing research culture at the hospital. It was decided the NPU would align itself to the nurse educator team because it had an overarching view of the types of projects being undertaken and so was able to identify priority work. We did of course provide regular feedback to the nurse unit managers, and monthly meetings were held with the director and assistant director of nursing to keep them up to date. This was important because it enabled them to impart information that would help staff support any further work the NPU might become involved with, especially that coming down from the local area health board or the state's health ministry.

Developing aims and structures

As stated above, the aim of the NPU is based on the original concept suggested by Gardner and Woollett (2006), which entails the professional development of nursing through active engagement in evidence-based clinical practice, education and research. It achieves this by focusing on three distinct areas and objectives: development of the nurse, of nursing practice and of care delivery processes (Figure 1). We also saw important roles for the NPU in supporting hospital-based events relating to nursing education, research, practice and enhancing care delivery, and endorsing ongoing opportunities for postgraduate education and higher degree research supervision. A benefit of this was the development of a local pool of research students to support capacity building and professional development of the academic team. The fact that research could be locally generated from the hospital nursing team is an important consideration in developing evidenced-based care delivery (practice development principles 1, 3 and 4). We believe the NPU's mission statement (Figure 1) addresses this by its stated objectives and also by providing access to university systems and processes such as library and information technology services that would be difficult to access without the partnership.

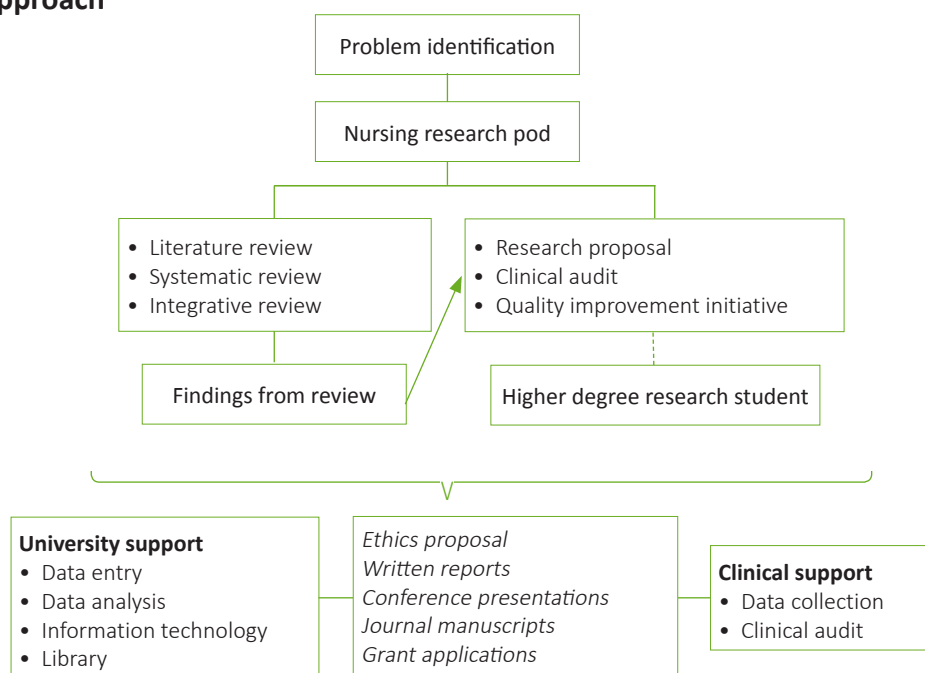
Figure 1: Model for nursing professorial unit: three core objectives of the NPU in developing a culture of nursing research within the hospital environment – develop the nurse, develop nursing practice and develop care delivery processes



The approach to clinical nursing research: nursing research pods

As awareness of the NPU increases around the hospital, the unit team has been approached to support and provide research expertise on a number of projects from a variety of clinical environments – paediatrics, surgery, wound care, critical care, medicine and operating theatres. The number and types of these has made it challenging to partner NPU members with practitioners for the best possible team collaboration, so we opted to divide the unit into discrete research pods, each led by an NPU member. These include the acute and critical care pod, the learning and teaching pod and the child and maternal health pod, and each has a focus around the leader's research interest: our bioscientist (JC) leads the teaching and learning pod, the associate professor (MC) leads the acute and critical care pod, and so forth. The research assistant and health subject librarian serve integral roles in supporting literature searches, and systematic, literature or integrative reviews, as well data collation and analysis with our statistician (Figure 2). Incoming work is then allocated to a research pod, with each pod leader responsible for leading the work. Using an adapted version of the Caramanica et al. (2002) collaborative model (Figure 2), we place the work into one of two streams – literature and/or systematic reviews and research, making it easier to allocate work to the most appropriate pod.

Figure 2: The collaborative model of research engagement, which adopts a non-university research approach



This serves two important purposes. First, from an academic standpoint it means each pod leader becomes the joint chief investigator on the project with the hospital partner, enabling them to develop important research leadership skills as part of capacity building and ongoing professional development. It also means that for any publications or conferences arising from the work, the pod leader becomes the university’s lead author, building their academic profile. If a project is progressed to a higher degree research study, the pod leader becomes the principal supervisor, with another NPU member becoming associate supervisor. Higher degree research projects also include a member of the hospital nursing team as a clinical supervisor for the student. We feel this strengthens collaboration between the university and the hospital as well as supporting clinical research development of the nursing team (Table 3).

The second effect is to raise the nursing profile at the hospital by publicising an active nursing research culture as well as having members of the nursing team publishing and presenting at national and international conferences. This enables, especially from the conferencing perspective, the NPU and the hospital to network with other hospitals and universities in pursuing joint collaborative projects that could contribute to the evidence base, develop joint publications and lead to successful grant applications. In terms of the nursing teams’ professional development, research aside, it promotes an environment where academic achievement at masters or even PhD level is seen as a means of developing and raising the profile of nursing in the hospital (Table 3).

Table 3: Cross-organisation collaborative model for promoting clinical nursing research excellence

Research, clinical audit, quality improvement		Higher degree research (HDR) project		
Collaboration	University	Hospital	University	Hospital
Leadership	Nursing research pod		Academic supervision	Clinical supervision
Team	Chief investigator (research)	Chief investigator (clinical)	HDR developed nursing team	
Measurable outcomes	Publications; conferences; grants; HDR student completions			

Challenges

The initial challenge for us was establishing a trusting relationship. Too often such collaborations originate when the university wants the hospital to become a test bed for its research (D'Este and Perkmann, 2010; Hughes and Kitson, 2012). The hospital that hosts our NPU had experienced this from a number of universities, with little discernible return for the hospital. We overcame this by adopting a 'non-university research agenda', which meant that any and all research, clinical audit or quality improvement initiatives would come directly from the hospital, or in this case the nursing teams. Of course this had to meet the university's strategic plan around engagement so the work of the NPU was mapped accordingly, with the measurable outcomes for the university being joint publications and conferences as well as successful applications for grant monies, especially those for public sector research and industry research. Another challenge was to engage members of the nursing team in research activities. It is widely recognised that some nurses view undertaking research with trepidation or, in many cases, seen as not important to their current clinical role (Hale, 2009; Higgins et al., 2010) or the realities of delivering clinical care. Initially the NPU took a more prominent role in developing the research project (Table 2) so that such uncertainties would be more manageable for the nursing team. We did develop 'drop-in' research workshops to allow those interested in undertaking a project in their clinical area to gain familiarity with the rudiments of research methods, such as understanding the PICO (patient, intervention, comparison and outcome) approach to developing a research question or developing simple but effective data collection tools (practice development principles 7-9; Manley et al., 2008).

Evaluation

The NPU has been running for nearly two years from its initial development and has produced and published 10 articles in Q1 and Q2 journals from a number of successful research projects. In addition it has been successful in obtaining more than AU\$200,000 (£120,000) in grant money to support research projects, some of which have been innovative in transforming nursing practice and nursing processes, especially in the critical care arena. Some of this research work is ongoing, and two of the more exciting areas involve international collaborations arising from networking with others. The NPU has collaborations with hospitals and universities in Canada, Austria, the UK, New Zealand and the US, focusing on nurse-led discharge clinics, clinical simulation, workforce development and failing to fail. Other healthcare professional teams are also seeing the benefits of the NPU's promotion of nursing research; interprofessional research projects are being developed, such as on the evaluation of a swallow screening tool and on evaluating post-discharge follow-up clinics.

Conclusion

The non-university based research approach has been integral to the continuing success of the NPU. It has meant that we have a collaborative partnership that transcends the traditional research approach that universities and the healthcare sector often take. While we concede that this approach is probably not new we maintain it is innovative inasmuch as the university is not the sole driver of nursing research, especially where it comes to building an evidence base of care. The future direction of the NPU is to not only develop a positive culture of nursing research and training, but to develop hospital-based nursing research with its core aim of continuing to build on the unit's work. In addition we are trialling the inclusion of other faculties, such as education, in supporting higher degree research, especially around literacy, writing and academic skills to promote the nursing profession.

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