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ORIGINAL ARTICLE

Knowledge and learning in speciality practice

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Speciality nursing;
NICU-BKAT4 learning preferences

Abstract *Purpose:* To describe the working knowledge (knowledge-in-action) of nurses in the speciality of neonatal nursing and understand how they acquire this knowledge to inform strategies for orientation, mentorship, in-service programs and curricula of speciality neonatal programs. A questionnaire consisting of three parts; demographics, questions about outcomes of care and the NICU-BKAT4 knowledge questionnaire. Was distributed to all neonatal nurses in Neonatal Intensive Care Units (NICU) and Newborn Emergency Transport Service (NETS) in New South Wales Australia.
Results: Nurses with less than one year speciality experience typically had the lowest NICU-BKAT4 scores and 'critical' knowledge essential for safe practice (p's $< .001$). Patterns of learning emerged, with the majority (97%) of novice nurses showing a preference for experiential 'on-the-job' learning.

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Conclusion: This research adds to the understanding of nurses' learning preferences, has implications for speciality nursing education and practice and suggests a review of current educational strategies.

Introduction

The shortage of a skilled nursing workforce is a global concern for health (Bleich et al., 2003; Buchan and Aiken, 2008; Drury et al., 2008; O'brien and Gostin, 2011). As requirements for nurses increase to address workforce needs, particularly within speciality areas, recruits include novice nurses (new graduates within 1 year of registration) and those from more general areas of nursing without specialist training (Baumann et al., 2011). Evidence suggests this lack of an experienced and appropriately trained workforce affects patient safety (Twigg et al., 2010; Voepel-Lewis et al., 2013; West et al., 2014; Whyte et al., 2009), especially within critical care environments (Travale, 2007). Consequently, there is increasing international recognition of the growing gap between nurses' knowledge and skills and patient care needs. Acknowledgement of the pressing need to appropriately educate novice and inexperienced nurses within speciality practice environments across occurs both the developing and the developed world (Petty, 2014).

Neonatal intensive care as a speciality area of practice where nurses need to anticipate and respond appropriately to the rapidly changing status of patients, solve complex and evolving problems promptly and re-prioritise, sometimes frequently, due to the unpredictable and diverse nature of the work (www.ACNN.org.au). Working knowledge has been described as knowing in action (Kennedy, 2004) and is a combination of cognitive (know what) and practical (know how) knowledge (Lafave, 2008). The increasing need for expertise in clinical practice has mirrored increasing patient acuity and complexity in speciality environments and demands for evidence-based practice. Determining gaps in knowledge however is difficult and often relies on individual reporting or becomes evident following error (Ebright et al., 2004).

The current focus on evaluating quality of healthcare has led to a variety of tools designed to measure the knowledge needed to provide safe nursing care. One such tool, The Basic Knowledge Assessment Test-NICU (NICU-BKAT4), is a standard test developed and used in the USA to measure neonatal nursing knowledge in specific clinical areas (Toth, 2007). This tool which measures cognitive knowledge enables pre-NICU orientation assessment, assessment of different teaching methods, identification of in-service program content, and facilitates the placement of nurses with prior NICU experience.

Learning is complex and occurs in many ways. Advances in technology have increased the number of innovative educational tools and strategies available to promote learning. Interestingly, however, Pilcher and Bedford (2011) found that while nurses were willing to use technology to learn, most indicated a preference for a formal lecture format. Nurses have described the workplace as a key learning environment (Skar, 2010) and acknowledge the need to continue to learn from colleagues whom they perceive as more experienced following completion of structured educational programs (Greenwood et al., 2000; Hunter et al., 2008; Premji and Chapman, 1997; Turrill, 2011). This highlights the value of shared learning through social interaction, networks and communities of practice (Andrew et al., 2008).

Method

Aims

The researchers sought to understand neonatal nurses' working knowledge and the manner of its acquisition to optimise future learning strategies for orientation, mentorship, in-service programs and the curricula of speciality neonatal programs. In particular, the study aimed to compare novice with experienced nurses in neonatal nursing.

Participants

All neonatal nurses working in the nine NICUs and the Newborn Emergency Transport Service (NETS)

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