Nurse Education Today 35 (2015) 556–561

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt

Advanced life support (ALS) instructors experience of ALS education in Western Australia: A qualitative exploratory research study

John Taplin *, Ruth McConigley [1]

School of Nursing and Midwifery, Faculty of Health Sciences, Curtin University Bentley Campus, GPO Box U1987, Perth W.A. 6845, Australia

ARTICLE INFO

Article history:
Accepted 16 December 2014

Keywords:
Advanced life support
Competency
Nurse education
Qualitative research
Resuscitation
Skill decay
Skill maintenance

SUMMARY

Background: When cardiac arrest occurs, timely competent advanced life support (ALS) interventions by nursing staff can influence patient outcomes. Ongoing ALS education influences maintenance of competency and avoids skill decay.
Objectives: To explore the methods of ALS education delivery for nurses in the workplace; describe the issues relating to maintaining ALS competency; explore ALS competency decay for nurses and develop recommendations for the provision of continuing ALS education.
Design: A qualitative exploratory design was used to study ALS education provision in the workplace.
Participants: Data were collected from ALS nurse experts in Western Australia by face-to-face and phone interviews.
Methods: Semi-structured interviews were conducted and organised around a set of predetermined questions.
Results: Two major themes were identified; the first theme *Demand and Supply* describes the increasing demand for ALS education for nurses and the challenges with providing timely cost effective traditional face-to-face ALS education. The second theme, *Choosing The Best Education Options* describes new ways to provide ALS education using emerging technologies.
Conclusions: The study suggested that using e-learning methods would assist with educating the maximum amount of nurses in a timely manner and e-learning and teleconferencing offer opportunities to reach nurses in distant locations. Delivering ALS education more frequently than annually would increase skills maintenance and lessen skill decay. Further research is required to explore which blended e-learning model is best suited to ALS education.

Introduction

ALS certification has become a mandatory competency for most nurses working in critical care in Australia (Allen et al., 2013; Preston et al., 2009; Walker et al., 2013; Williams, 2011). ALS competency requirements have now been extended to all nurses working in rural and remote locations in Western Australia (Western Australian Country Health Service, 2013). Organisations like the Australian Resuscitation Council and the Australian College of Critical Care Nurses provide ALS certification and recertification courses (Allen et al., 2013; Williams, 2011), based on the guidelines of the International Liaison Committee on Resuscitation (ILCOR) and Australian and New Zealand Committee on Resuscitation (ANZCOR) (The Australian Resuscitation Council Online, 2013).

The aim of this study was to explore advanced life support instructor issues relating to the delivery of ALS education to a diverse nursing workforce in Western Australia. The key objective was to develop recommendations for the provision of continuing ALS education to help nurses avoid competency decay.

Background

The recommended timeframe between ALS courses varies between one to four years depending on the course providers (Allen et al., 2013; Williams, 2011; Yang et al., 2012). ALS knowledge and skill decay can occur rapidly following ALS course certification. A number of authors have reported that ALS competency decay occurs between six to twelve months after initial certification and ALS skill decay occurs faster than ALS knowledge decay (Allen et al., 2013; Walker et al., 2013; Williams, 2011; Yang et al., 2012).

Traditional learning in ALS involves the provision of pre-course hardcopy reading materials for participants and attendance at a two day face-to-face workshop, with written assessment of the theoretical components and practical ALS skills assessed using case based scenarios (Allen et al., 2013; Williams, 2011). Traditional learning in ALS is time consuming and labour intensive and there has been a trend towards using e-learning and blended learning models of delivery. Some ALS

* Corresponding author. Tel.: +61 8 9266 3127; fax: +61 8 9266 2959.
E-mail addresses: j.taplin@curtin.edu.au (J. Taplin), R.McConigley@curtin.edu.au (R. McConigley).
[1] Tel.: +61 8 9848 1303; fax: +61 8 9266 2959.

http://dx.doi.org/10.1016/j.nedt.2014.12.017
0260-6917/

providers have introduced the use of online learning and e-learning for the theory component of ALS competency (Magura et al., 2012). The introduction of technology offers new options for educators including e-learning, e-simulation scenario based skills training and videoconferencing (Allen et al., 2013; Nolan et al., 2010).

In Perth, the capital city of Western Australia, the metropolitan health service delivers healthcare to a population of 1.83 million people through 35 hospitals (Government of Western Australia, 2012). The Western Australian Country Health Service delivers healthcare services to approximately 520,000 people through 79 rural and remote hospitals (2012), in an area of close to 2.5 million square kilometres (Government of Western Australia, 2012). This rural health service handles almost as many emergencies as the combined Perth metropolitan hospitals (Government of Western Australia, 2012). Delivery of education in an Australian rural setting can be difficult because of geographical distance, staffing concerns, particularly difficulty with backfill and the need for a range of skills in the generalist rural setting (Francis, 2005).

Aims and objectives

This study explored the demands of ALS education in Western Australia. The objectives of the study were to:

1. Explore the methods of ALS education delivery for nurses in the workplace in Western Australia.
2. Describe issues relating to maintaining ALS competency.
3. Explore ALS competency decay for nurses in Western Australia.
4. Develop recommendations for the provision of continuing ALS education.

Significance of the study

There are an increasing number of patients presenting to Australian hospitals in a physiologically unstable condition and studies have shown that hospital patients who have life threatening emergencies often receive substandard resuscitative care (Jenkins et al., 2011). ALS training improves short and long-term survival from cardiac arrest in hospitals (Moretti et al., 2007; Spearpoint et al., 2009).

The ALS literature indicates that frequent skills based learning and theoretical learning can improve ALS competence for nurses (Allen et al, 2013; Preston et al., 2009; Walker et al, 2013). Nurse access to ongoing learning has the potential to positively influence ALS skill maintenance and performance of ALS interventions. The increasing demand for ALS education in Western Australia has encouraged the development of novel ways to educate a geographically distant and diverse workforce.

Methods

A qualitative exploratory design was used to explore ALS education provision in Western Australia (Sandelowski, 2000). Data were collected from ALS nurse experts by interview. The study provided a descriptive account of ALS education of nurses in Western Australia and the meanings ALS experts attribute to education of nurses.

Sample and setting

The sample for the study was drawn from nurses who were experts in ALS education in acute public and private hospitals located in Western Australia, including the capital city Perth and rural and remote areas of the state. Some participants were known to the researchers, early participants were asked to identify and refer other people who met the inclusion criteria using a snowball sampling technique (Noy, 2008). The aim of sampling was to recruit participants from diverse workplaces and with varied experiences in providing ALS training so as to get a broad picture of ALS education in WA.

The participants were expert Registered Nurse members of the Australian College of Critical Care Nurses, Australian Resuscitation Council and Advanced Paediatric Life Support. An information sheet for participants was provided prior to the study. All participants provided informed consent prior to participating.

Ethical considerations

Ethical approval was provided by the Curtin University Human Research Ethics Committee [approval number SON&M 11-2013]. The risks were minimal, the potential risk was maintenance of anonymity in a small population. The sample size was small and to reduce the risk of accidental identification demographic data were reported as group data.

Data collection

Data were collected from the participants through semi-structured audio-recorded interviews guided by a series of open-ended questions (Whiting, 2008) [See Fig. 1]. Prior to the interview the guiding questions were provided to the participants, so that they had time to prepare responses. Interviews were conducted face-to-face where possible, or alternatively over the telephone, in a private setting by a trained interviewer (JT). Basic demographic information was gathered before the interview commenced. Audio recordings were transcribed verbatim. The data were organised for analysis using NVivo computer software (QRS International).

Data analysis

A constant comparison method of sampling and data analysis was used (Glaser and Strauss, 1967; Kumar, 2005; Lincoln and Guba, 1985). Interview transcripts were coded line by line, highlighting important passages, creating memos and noting insights (Morse and Richards, 2002) to identify and label nodes, using a process of open coding (Glaser and Strauss, 1967; Kumar, 2005; Strauss and Corbin, 1990). The memos and insights from each interview transcript were constantly compared to the nodes developed from the previous coded transcripts comparing concept with concept (Gibbs, 2007; Morse and Richards, 2002). Similar incidents and patterns were identified, described and grouped into categories (Gibbs, 2007; Kumar, 2005; Morse and Richards, 2002), and 'mapped' onto the numbered interview transcript

Interview Questions

1	Can you tell me about how ALS education is delivered at present?	
	Prompt	
	Do you use e-learning or blended learning in ALS education and if you do tell me about that? If not why not?	
2	What is your experience of nurse ALS competency skill decay?	
	Prompt	
	How do ALS competent nurses maintain ALS skills?	
3	Can you suggest options for improving ALS education delivery?	
	Prompt	
	How could face-to-face learning or e-learning assist to maintain nurse ALS competency?	

Fig. 1. Guide questions for the interview.