Clinical Simulation in Nursing (2017) 13, 501-510

Clinical Simulation in Nursing

www.elsevier.com/locate/ecsn

Featured Article

An Interprofessional Simulation-Based Learning Activity for Nursing and Physiotherapy Students

Diane Dennis, PhD[a,*], Anne Furness, MAppSc[a], Ravani Duggan, PhD[b], Siana Critchett, BN, Postgraduate Diploma (Midwifery)[b]

[a]*School of Physiotherapy and Exercise Science, Curtin University, Bentley, Western Australia, Australia*
[b]*School of Nursing, Midwifery and Paramedicine, Curtin University, Perth, Western Australia, Australia*

KEYWORDS
simulation training;
interprofessional education;
students;
implementation of simulation training;
patient simulation

Abstract
Background: The ability to work interprofessionally is considered a core competency for healthcare graduates because it promotes collaborative patient-centred clinical practice.
Methods: This mixed methods observational study utilised simulation of a patient-centred scenario to deliver an interprofessional learning activity to both nursing and physiotherapy students.
Results: Over one day during 2015, 198 students undertook the activity, with all completing two surveys evaluating the experience. Results suggested that they both enjoyed and valued the experience, especially in relation to the clinical interaction and learning that took place and the opportunity the scenario provided them to work as a team member.
Conclusions: Future interprofessional simulation activities will be able to utilise the generic self and peer-assessment framework and timetabling resources developed.

Cite this article:
Dennis, D., Furness, A., Duggan, R., & Critchett, S. (2017, October). An interprofessional simulation-based learning activity for nursing and physiotherapy students. *Clinical Simulation in Nursing, 13*(10), 501-510. http://dx.doi.org/10.1016/j.ecns.2017.06.002.

In the delivery of health care services, numerous groups of health professions work together to deliver patient-centred care. It follows that the ability to work interprofessionally is considered a core competency for health care graduates. Interprofessional education (IPE) involves learning from and with other professionals about their profession, and in health, the aim of IPE is to promote collaborative practice (World Health Organisation, 2010) to provide quality patient-centred care across settings. The premise of interprofessional learning is that it facilitates interprofessional socialisation and enables development of understanding as to the "fit" of one health care discipline with another (Arndt et al., 2009).

There is an expectation that students about to embark on clinical placements are prepared in terms of the basic skills required to undertake care in line with their profession. They may, however, have had limited training in what other professions have to offer their patients. In order to enable

Funding source: This work was supported by the Teaching Excellence Development Fund from Curtin University, Perth, Australia, 2015 (Grant number 35).

* Corresponding author: D.Dennis@health.wa.gov.au (D. Dennis).

1876-1399/$ - see front matter
http://dx.doi.org/10.1016/j.ecns.2017.06.002

patient-centred care (Australian Commission on Safety and Quality in Health Care, 2011), the importance of the eight learning domains of interprofessional collaborative practice needs to be reinforced to prelicensed health professionals as early as possible—communication, teamwork, professionalism, understanding of roles, critical reflection, consumer focus, situational awareness, and ethical practice (Stone, 2009). Beginning this process in the first year of a student's programme may be critical in improving student understanding, motivation, and engagement in future collaborative team care in the health setting. One of the barriers to implementing IPE in university training programmes is the alignment of timetabling to suit multiple groups and the large number of students involved.

Key Points

- Simulation-based learning may be used to deliver interprofessional education for nursing and physiotherapy students.
- With thoughtful timetabling, it is feasible to deliver a worthy simulation-based activity to a large number of students in a short period of time utilising the number of staff usually allocated to teach students using other education strategies.
- The assessment framework and activity timetable developed here may be applied generically to other disciplines in order to facilitate future interprofessional simulation-based learning activities.

Simulation-based learning (SBL) activities have widespread application across a number of fields and have been utilised in health education across numerous professions (Davis, Kimble, & Gunby, 2014; Henneman & Cunningham, 2005; Issenberg, McGaghie, Petrusa, Lee Gordon, & Scalese, 2005). The underlying theoretical framework and benefit of SBL is that it offers learners the opportunity to gain both technical and nontechnical skills and experience in a safe environment that facilitates repeated practice (Bond & Spillane, 2002; McLaughlin, Doezema, & Sklar, 2002; Weller, Nestel, Marshall, Brooks, & Conn, 2012). This enables students to translate theoretical knowledge to practise (Weller, 2004) and reflect on their performance and that of their peers and co-workers through debriefing (Kneebone & Nestel, 2005). It has been found particularly useful in improving knowledge, confidence (Boling & Hardin Pierce, 2016) and teamwork (Thistlethwaite, 2012), and also in the delivery of education to the largely millennial university cohort who value group work and team reflection (Garwood, 2015; Mangold, 2007). Evidence suggests that SBL should be introduced early into curricula in order to facilitate more complex learning later (Henneman et al., 2010).

The notion of utilising SBL as an education strategy to deliver IPE is becoming increasingly popular (Gough, Hellaby, Jones, & MacKinnon, 2012; Zhang, Thompson, & Miller, 2011), particularly in the nursing and medical domains with numerous publications emerging (Baker et al., 2008; Dillon, Noble, & Kaplan, 2009; James, Page, & Sprague, 2016; Poore, Cullen, & Schaar, 2014). There is less evidence for the specific interaction between nurses and other health professionals, including physiotherapists. The most recent systematic review of interprofessional simulation-based education (Gough et al., 2012) described only four articles that specified undergraduate physiotherapists partaking in IP training alongside other professional groups, including nurses. Results reflected that the experiences provided all students with a good opportunity to develop their own identity and learn about the roles of other professionals, however each study had limitations; these included small numbers (Leaviss, 2000), costly setup of purpose-built clinical education wards (Ponzer et al., 2004; Reeves, Freeth, McCrorie, & Perry, 2002), and the involvement of multiple professional groups at once (Alinier et al., 2008) that may have the potential to dilute exposure to and learning about individual professions.

An integral component of SBL is the debrief that occurs postscenario that may be self, peer, or facilitator led using a variety of approaches (Eppich & Cheng, 2015; Eppich, Hunt, Duval-Arnould, Siddall, & Cheng, 2015; Fanning & Gaba, 2007). In addition to limited evidence around the collaboration between physiotherapy and nursing students in simulation-based IPE, to our knowledge, there is a paucity of frameworks or checklists available that might facilitate peer and self-review of any interprofessional interaction post-SBL activity.

The primary project aims of this study were to:

1. Develop and implement an efficient and effective timetable that could be replicated by other faculty in future IPE SBL experiences involving large numbers of students and limited staffing, space and time.
2. Develop and trial a generic framework to facilitate peer and self-assessment of performance during an interprofessional activity.
3. Develop an IPE SBL activity for first year nursing and physiotherapy undergraduate students in a high-fidelity environment that would help them to understand their own professional identity and that of their co-workers whilst providing them with an opportunity to collaboratively practice team work to provide patient care.

The corresponding research aims of this study were to:

1. Evaluate the feasibility of whether a structured timetable could facilitate the flow of a large number of participants through a simulated learning activity in limited time.
2. Evaluate the feasibility of whether a framework outlining key components of interprofessional interaction