



*Project Report*

# Collaboration in clinical simulation: Leading the way

Karen Edgecombe



## *Author*

Karen Edgecombe

## *Project Team*

Karen Edgecombe, Christchurch Polytechnic Institute of Technology

Dr Philippa Seaton, Christchurch Polytechnic Institute of Technology

Karen Monahan, Nelson Marlborough Institute of Technology

Salome Meyer, Eastern Institute of Technology

Susie Le Page, UCOL

Gwen Erlam, Auckland University of Technology

Professor Pamela Jeffries, Johns Hopkins University, USA (International Project Mentor)

## *Publishers*

Ako Aotearoa, National Centre for Tertiary Teaching Excellence

PO Box 756

Wellington 6140

This project was supported through the Ako Aotearoa National Project Fund 2011, in the Collaboration Projects Funding Stream.

## *Published*

June 2013

ISBN: 978-1-927202-51-7

<http://ako.aotearoa.ac.nz/communities/collaboration-clinical-simulation-leading-way>



This work is published under the [Creative Commons 3.0 New Zealand Attribution Non-commercial Share Alike Licence \(BY-NC-SA\)](https://creativecommons.org/licenses/by-nc-sa/4.0/). Under this licence you are free to copy, distribute, display and perform the work as well as to remix, tweak, and build upon this work non-commercially, as long as you credit the author/s and license your new creations under the identical terms.

## Contents

Collaboration in clinical simulation: Leading the way .....	3
Introduction .....	3
Background .....	3
Project Objectives .....	4
Project Activities .....	5
Literature Review .....	6
Teaching and Learning Guidelines .....	6
Simulation Resources Inventory .....	6
Other Activities .....	7
Recommendations .....	7
References .....	8

# Collaboration in clinical simulation: Leading the way

## Introduction

Simulation is a teaching and learning strategy that is increasingly used in nursing education to prepare students for the clinical workplace. This collaboration addresses the need in New Zealand undergraduate nursing education to enhance teaching and learning quality in simulation. By creating a collaborative community of practice our aim was to provide clear direction for simulation in undergraduate nursing education. Through creating a collaborative network in the community of practice, we had the opportunity to increase knowledge, resources and the sharing of expertise in simulation.

## Background

Simulation and the opportunity to experience realistic clinical scenarios prior to the actual experience are noted to be a core characteristic of industries where decisions and actions have a major impact, for example the aviation industry. There are significant parallels between these industries and the practice of health professionals where patient safety is paramount. Furthermore, safety and quality of healthcare delivery are the driving forces behind health professionals' education.

Acknowledging this need, the New Zealand delegates at the 2009 Australasian Nurse Educators Conference indicated clear motivation to develop educational facilities and provide updated technology within simulation centres, similar to international counterparts. The benefits of simulation as a teaching and learning methodology were being recognised internationally as high quality educational practices. Discussions between nursing lecturers recognised the advances being made with simulation and demonstrated a willingness to share ideas, increase communication, and become more aware of methods, resources and techniques commonly utilised in the preparation of simulation-based activities with nursing students. However, despite the willingness of nursing lecturers to work collaboratively, there was no organised network or sustainable mechanism for this communication, and the sharing of ideas and resources was *ad hoc*, usually linked to conference networking and links through commercial suppliers of simulation equipment.

We recognised that there needed to be a collaborative community that would meet these needs. Collaborations to develop simulation in nursing, such as that supported by the National League for Nursing in the United States of America, demonstrate positive outcomes and provide an example of the benefits that arise from a community of practice (National League for Nursing, n.d.). Additionally, published literature supporting the uses of simulation for teaching and learning has moved past the emergent phase and now is a key topic for research and development within nursing education. By creating the community of practice, we recognised that we would have the opportunity to explore and expand our networks in regards to research and development, and the opportunity to work collaboratively with colleagues was exciting.

New Zealand has 17 nursing schools from which approximately 1300 Bachelor of Nursing students and 60 Diploma of Nursing students graduate per annum (Nursing Council of New Zealand, 2009). In educational terms the consistent application and use of simulation learning in these programmes ensures that students receive parity of access to clinical learning experiences. Internationally it is recognised that this access to clinical learning experiences is becoming more difficult to achieve due

to pressures from increasingly complex client health issues and demanding healthcare systems (Kuznar, 2007; Nehring, 2010). Furthermore, quality education mandates the provision of learning environments that actively engage learners in their learning and clinical environment (Kurtz, Lemley & Alverson, 2010; Rothgeb, 2008), and that student learning is contextually appropriate, assisting in the transfer of knowledge to practice.

Positive learning experiences are promoted with the opportunity to develop knowledge, complex skills, clinical decision making, professional attitudes and teamwork abilities in the simulated clinical environment. These attributes ensure the readiness of the learner for the clinical environment, maximise the learner's performance in the workplace, enhance learning in the workplace, and afford the learner the opportunity to apply clinical judgement and critical thinking without jeopardising patient safety. With a consistent, evidence-based framework for implementation of simulated learning, students will receive learning opportunities that are designed to effectively meet their needs. This will include access to learning based on consistent standards for teaching in simulation and quality resources that have been developed specifically to meet the needs of nursing students in New Zealand.

Within undergraduate nursing education it was clear that there were benefits from the initiatives proposed in this project. Simulation is a rapidly developing area of health education and the project provided the opportunity to facilitate effective teaching and learning practices to promote quality education. This project would therefore coordinate and support the development of simulation activities, and develop capacity and capability among teachers and institutions, contributing to knowledge development in the future.

## **Project Objectives**

The objective of this project was to bring together nursing lecturers from New Zealand schools of nursing and establish a community of practice for simulation in undergraduate nursing education. This community of practice would provide support and resources for teachers of simulation. It would also provide the platform to disseminate knowledge and skills in nursing simulation increasing the impact for both learners and teachers.

The project deliverables were to:

- establish a collaboration to develop a community of practice
- develop and share knowledge, resources and practices for nursing simulations
- develop a literature review
- develop teaching and learning guidelines generated by the literature review
- establish learning support for teachers to use simulation for effective student learning and preparation for clinical practice
- plan a collaborative research project
- establish a community of practice of educators with sound understanding and teaching skills for simulation.

## Project Activities

Under the auspices of this project, the activities described below have been achieved.

### **Introductory Workshop:** 26–27 April, 2012 (at Auckland University of Technology)

All New Zealand schools of nursing were invited to the workshop and all attendees were closely associated with simulation within their respective schools. The workshop had been advertised on the Laerdal (the main supplier of simulation equipment within New Zealand) website, through the Nurse Educators in the Tertiary Sector (NETS) network, and via individual schools of nursing. Of note, we also received international interest in the workshop and also interest from other health sectors (*i.e.* midwifery).

The workshop programme involved networking and familiarising with other schools, their programmes and simulation activities. All attendees participated in the dialogue and all demonstrated a willingness to openly share experiences, advice and knowledge. The impact of the workshop opportunity was acknowledged and the participants were eager to progress any work further and continue the collaboration.

A variety of workshop aims were achieved: The workshop attendees identified the need to define simulation within the New Zealand undergraduate nursing context and quickly agreed to adopt the definition as drawn up by the Nursing Council of New Zealand Education Programme Standards for the registered nurse scope of practice (2010). A database of self-identified academics with an interest in simulation was collated. Alongside this the group mission statement, group goals, barriers to and enablers of simulation were identified and an agreement reached between attendees to share paper resources, ideas and knowledge and a commitment towards collaborative research opportunities and projects.

We were able to invite Dr Jane Torrie to the workshop. Dr Torrie chairs the New Zealand Association for Simulation in Healthcare (NZASH) and she congratulated the group on the meeting and acknowledged the “phenomenal achievement” in being able to gather for the workshop, saying that it demonstrated a willingness and opportunity for developing strength in knowledge and a shared vision. Dr Torrie highlighted the progress and direction of simulation within health care and discussed the need for further collaborative projects.

### **Community of Practice:** Web page developed within the Ako Aotearoa website

All workshop attendees were invited to join the online community. The number of lecturers who took up this opportunity has been less than anticipated; however, it is acknowledged that the online community is one of the many tools that lecturers use for communication and sharing of ideas. Other avenues for communication and networking include direct contact (through the contacts list formulated at the workshop), liaising at conferences and through the various tertiary networks (for example, NETS) and via the Laerdal newsletter. The web page contains a:

- news page, communicating conference links, news and general happenings within the simulation world
- forum for sharing ideas, posing questions and general discussion

- files site, which contains the literature review reference list, the simulation lecturer database, questionnaires relating to simulation practice and other literature relating to simulation
- people page and a calendar of events.

The major challenge for this web page has been encouraging lecturers to engage in the site. Feedback was sought from the workshop participants to decipher the reason for not engaging in the web page and it was felt that there was a lack of understanding in regard to enrolling/joining the site. Lecturers were able to visit the web page without membership. Some members felt that the site was difficult to negotiate and so alterations were made to the page to enable knowledge and resources to be overt and increase the navigation of the page.

The community of lecturers involved in simulation is not large. Twenty-two lecturers attending the workshop were regularly involved in simulation practice and only one of these had a full-time simulation position, with all others involved in various aspects of teaching and learning with other courses at their respective institutions. The collaborative community within the web page continues and it is worth noting that this site does result in contacts and networking opportunities. As previously mentioned, the lecturers do engage with each other regularly outside of this space and a target for future practice would be to increase the level of engagement within this site.

### **Literature Review**

As part of the project deliverables a literature review was completed. This literature review focused on the teaching and learning approaches to clinical simulation within undergraduate nursing education. Specifically, the literature review addressed the good practices for teaching and learning in clinical simulation and an output of this literature review was the teaching and learning guidelines for effective simulation in undergraduate nursing education (Edgecombe et al., 2013).

### **Teaching and Learning Guidelines**

The goal of any educational intervention, whether it is a focused skill, simulation-based scenario, clinical decision making or teamwork exercise, is to increase the knowledge and breadth of the students' learning. From this, the lecturer needs to utilise best practices in using simulation as a teaching method. There are a number of recommendations and strategies that can be implemented when considering teaching and learning guidelines in simulation (see Edgecombe et al., 2013).

### **Simulation Resources Inventory**

The initial intention of the project group was to create an inventory of simulation practices and resources used by nursing lecturers in teaching practice. At the workshop we took the opportunity to recognise where and when simulation occurs within the various school curricula and how simulation is applied as a teaching and learning methodology. All schools utilise simulation in some form throughout their programmes and curricula. In general terms, simulation is split between skills-based teaching and learning, and 'scaffolds' in complexity into scenario-based simulation exercises. Within these scenarios the students are expected to utilise their clinical decision making and clinical judgement skills and practice their teamwork and communication skills to ensure best patient outcomes.

There are several teaching and learning approaches currently utilised for the incorporation of simulation into school curricula. Simulation always occurs prior to clinical practice and does not take the place of actual clinical experience. All schools use a variety of teaching and learning approaches to incorporate simulation into their courses including problem-based learning, role play, narrative enquiry, context-based learning and constructivism. The inclusion of simulation into objective structured clinical examination (OSCE) formative assessments occurs widely and there are areas where OSCE is used as a summative assessment with the student being required to pass the assessment in order to progress to the clinical placement. Of wide discussion was the view that being able to share these experiences and approaches to simulation and curricula through the workshop was invaluable.

### **Other Activities**

The collaboration enjoyed some unexpected publicity during the project time. The project was publicised widely on the CPIT website, and has also been mentioned within Laerdal communications and newsletters. The project has also been noted by visiting scholars and has been visible amongst their conference presentations in terms of 'projects to watch and be involved in'. We have also had the opportunity to present our project to the wider community in simulation specialist meetings, and will be presenting again in July 2013 in Wellington at the next Simulation User Meeting.

### **Recommendations**

A strong supportive community of practice for educators with a responsibility for undergraduate nursing education and simulation requires a focused commitment. It also requires time and opportunity to explore aspects of simulation as a teaching and learning approach and the desire to further this educational modality within the New Zealand context. On this basis the recommendations are as follows:

- An annual forum needs to continue within New Zealand whereby attendees are supported by their respective institutions to further develop and nurture the skills, knowledge, sharing of ideas and networking amongst the simulation specialists.
- There is definite scope for further collaborative research between institutions and schools of nursing. Engaging in the collaborative community of practice would be a cornerstone for lecturers in terms of awareness of current New Zealand and international simulation research. The community of practice would also allow the engagement and dialogue for potential research initiatives and allow lecturers to network and openly discuss research opportunities.
- The community of practice web page needs to be continually promoted through respective networks, publications and conference activities and presentations. As mentioned previously the uptake by the workshop attendees was slower than expected and whilst it is recognised that other avenues are utilised to communicate, the web page is an ideal location in which to engage.
- There is further scope to determine the breadth and use of simulation within New Zealand schools of nursing curricula. While this project has introduced the notion of working more collaboratively and effectively, and there is no set requirement regarding prescribed hours of simulation within nursing training, there is definite opportunity to further explore simulation delivery in relation to teaching and learning methodologies.



## References

- Edgecombe, K., Seaton, P., Monahan, K., Meyer, S., LePage, S. & Erlam, G. (2013). *Clinical Simulation in Nursing: A literature review and guidelines for practics*. Retrieved from <http://akoaootearoa.ac.nz/communities/collaboration-clinical-simulation-leading-way>
- Jeffries, P. (2007). *Simulation in nursing education: From conceptualisation to evaluation*. New York, NY: National League for Nursing.
- Kurtz, C., Lemley, C., & Alverson, E. (2010). The master student presenter: Peer teaching in the simulation laboratory. *Nursing Education Perspectives*, 31(1), 38–40.
- Kuznar, K. (2007). Associate degree nursing students' perceptions of learning using a high-fidelity human patient simulator. *Teaching and Learning in Nursing*, 2, 46–52.
- Nehring, W. M., & Lashley, F. R. (2010). *High-fidelity patient simulation in nursing education*. Sudbury, MA: Jones and Bartlett Publishers.
- Nursing Council New Zealand. (2009). Annual Report 2009. Retrieved from <http://www.nursingcouncil.org.nz/download/91/annual-report09.pdf>
- Rothgeb, M. (2008). Creating a nursing simulation laboratory: A literature review. *Journal of Nursing Education*, 47(11), 489–494.
- Simulation Innovation Resource Centre. [<http://sirc.nln.org/>]. Retrieved November 1, 2010 from <http://sirc.nln.org>