

TITLE:

DEVELOPING CLINICAL SCENARIOS FROM A EUROPEAN
PERSPECTIVE: SUCCESSES AND CHALLENGES

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Abstract

This paper presents developmental work involving students from University College Dublin (UCD), Ireland (n=9), University of Surrey, England (n=8) and University of Ljubljana and University of Maribor, Slovenia (n=5) participating in the Erasmus Intensive Programme. The Erasmus programme offers a two week 'summer school' in the Faculty of Health Sciences, University of Maribor, Slovenia. Using a participatory approach, facilitators from both the UCD and Surrey engaged with students from all of the universities to develop scenarios for simulated learning experiences, in the care of older people, for utilisation on an e learning facility and within the simulated clinical learning environment. Students developed key transferable skills in learning, such as information literacy, cultural diversity, team working, communication, clinical skills acquisition whilst exploring differences in healthcare delivery in other European countries.

Key words

Clinical scenario development;

European perspectives;

Clinical skills acquisition;

Fitness for practice.

Introduction

Nursing and midwifery training needs to ensure that new registrants are able to deliver safe and effective care (McCullum et al, 2010). The Nursing and Midwifery Council (NMC), the professional and regulatory body for the United Kingdom (UK), states that any registered nurse has ‘a duty of care to patients and clients who are entitled to receive safe and competent care’ (NMC, 2008a, p4). Historically concerns have been raised both nationally (NMC, 2004) and internationally from the International Council of Nurses (ICN, 2002) and the World Health Organisation (WHO 2006) regarding the training and assessment healthcare professionals receive in physical care skills (Scobie, et al 2003). The traditional ‘apprenticeship’ model of learning has resulted in anxieties amongst healthcare educators and professional and regulatory bodies regarding the robustness of the supervisory relationships that students receive in practice (Nicol and Glen, 1999). The ‘Fitness for Practice’ Report (United Kingdom Central Council for Nursing Midwifery and Health Visiting, 1999) identified patient care skills deficits in newly qualified nurses. As a result “essential skills clusters” for pre-registration nursing and midwifery programmes have been developed, by the Nursing and Midwifery Council (NMC, 2007). The clusters offer a comprehensive list of “essential skills”, aimed to reflect the skills required for “fitness for practice” and safety at point of care, however their impact has yet to be evaluated. Such initiatives have also been undertaken in Europe through the European Healthcare Training Accreditation Network (2004) and the World Health Organisation’s (2009) “Global standards for the initial education of professional nurses and midwives”. However given the global challenges for healthcare educators,

where inequities in funding and delivery resulting in a lack of evidence based practice to enhance the safety and effectiveness of patient care means global standards are not achievable for all at this point in time. The NMC, ICN and the WHO acknowledge the role simulated learning plays developing competent and safe practitioners and their view that it should be embedded in curricula is to be applauded, however as Gaba (2004) suggests simulation is a technique rather than a technology thus its delivery, both nationally and internationally, is dependant upon the learning experiences created and the facilitation of these experiences.

This paper draws upon work developing clinical case scenarios, as a learning strategy, through working with a group of pan european student nurses, participating in a ten day Intensive Programme (also known as 'Summer School'). The Summer School was sponsored by the European Union Erasmus Lifelong Learning Programme which seeks to enhance the quality and reinforce the European dimension of higher education by encouraging transnational cooperation between universities. Student nurses and nurse educators from Higher Education Institutions (HEIs) in Dublin (Ireland), Surrey (England, UK), Ljubljana and Maribor (Slovenia) participated in the school.

The summer school enabled delegates drawn from adult, child, mental health nursing and pre hospital care to utilise simulated learning to develop their knowledge and understanding of the care of older people, thus gaining insight into the differing modalities of healthcare provision and nurse education in the participating countries. A key outcome of the summer school was that students extended their skills in scenario development, within the theme of

older person nursing care, for simulated and e-learning. The generation of scenarios involved group work with peers from the summer school requiring familiarisation with key transferable skills such as data extraction and analysis to provide information for scenarios contemporaneous with healthcare practice. Scenario development required the building of evidence based decision trees for care, delegates found this challenging as clinical guidelines varied across students' countries. One such variation in clinical guideline was in the delivery of breaths during cardiac arrests. The Surrey and Slovenian students followed the European Resuscitation Guidelines (2005) and the Dublin students the American Heart Association (2005) guidelines. Such variations in clinical guidelines not only provide challenges for students and academics in scenario development, but exemplify why a mobile healthcare workforce may be problematical if effective orientation programs are not in place for new staff seeking employment in other countries.. Workforce mobility has resulted in changes in demographic patterns, evolving multiracial and multiethnic groups (Horton et al. 2008) thus a more culturally diverse society and healthcare workforce has develop requiring educators to be more creative in the delivery of education and training.

The Erasmus program supports this mobility recognising it is as a result of the global market and internationalisation of organisations and advocates that transparent processes for accreditation and qualification are at its centre. However as our students identified qualifications and credits are only part of the story as for practitioners to be truly mobile employers need to be assured of the clinical competency of their employees,. Healthcare systems, as a result, are evolving as medical advancement based on developments in

pharmacological and physiological research and the implementation of technology (Fagerberg, 2003) and healthcare education needs to keep pace with these advancements by utilising simulated learning to facilitate mobility of the healthcare workforce without reducing patient safety..

Global recognition of the contribution simulation has to the development of clinical skills is widely acknowledged, although research is largely limited to the 'real life' simulated clinical environment, where its positive attributes are well documented (Kneebone et al., 2004; Melnyck 2008; Neudorf et al, 2008). This project developed scenarios for both the virtual and "real life" simulated environment however the efficacy of the virtual simulated environment to clinical skills development has yet to be evaluated (McCallum et al., 2010, p.2). Whilst the relationship between simulated or actual clinical performance and critical thinking skills remains unclear (Fero et al., 2010), it would appear that nurses are able to develop high levels of vigilance and clinical judgement to identify changes in patient status requiring nursing or medical intervention (Buerhaus et al. 2005).

Enhancing safety through scenario development and simulated learning

Risk reduction in patient care has implications for nurse educators and requires strengthening of curricula in areas such as patient safety and competency to practice. Consequently the role of risk reduction and the acquisition of clinical skills (Melnyck, 2008) through assessments of proficiency in clinical skills needs to be addressed by educators. The responsibility for the ongoing education and assessment of pre-registration nurses in clinical skills involves both Higher Education and Healthcare

Organizations (HO). Students are supervised by qualified nurses, in the United Kingdom as required by the NMC (2008b), however levels of supervision are variable across different countries as not every professional and regulatory body has a requirement for qualified mentors to support student learning. Given the available evidence one could question whether all qualified nurses are able to offer adequate levels of supervision and is this due to the knowledge deficits and difficulty in making judgements about proficiency in practice of these nurses a view advocated by Duffy (2004) in "Failure to fail". A further perceived challenge for practitioners is understanding the terminology adopted in clinical skills assessment with the NMC (2005) adopting the phrase "proficiency" and healthcare organisations and other professional and regulatory bodies, such as the Healthcare Professions Council, adopting the phrase "competencies" in response to directives from the Department of Health (DH, 2004).

According to Bambini et al. (2009) the simulated clinical learning environment should offer an authentic learning experience, where students have the opportunity to practice essential clinical skills to form what Kneebone et al. (2004) view as the scaffold of knowledge and skills required for safe practice. Such authenticity aids students' clinical skills acquisition, confidence and clinical judgement to effectively build proficiency (Bambini et al. 2009; Koper, 2005). However, the challenge remains for nurse educators to clearly identify how skills acquisition should be developed and assessed especially as the development of scenarios for simulated learning is time consuming and needs to be flexible enough to allow for the different working practices and protocols for an international audience (Jeffries, 2005).

The patient safety agenda (DH,2000) has driven the inclusion of simulation in curriculum design to prepare a capable and competent workforce (Fraser and Greenhalgh, 2001), this has been further emphasised by the World Health Organisation (2009) who proposed the utilisation of a range of teaching and learning strategies including simulation to assure the development of safe practitioners. Thus the efficacy of such educational innovations and the evidence base supporting them must be explicit (Colliver, 2002) and as Bradley (2006) and Bradley & Postlethwaite (2003) propose embrace scientific and interpretative stances to demonstrate a holistic approach to the acquisition of clinical skills (Dent, 2002).

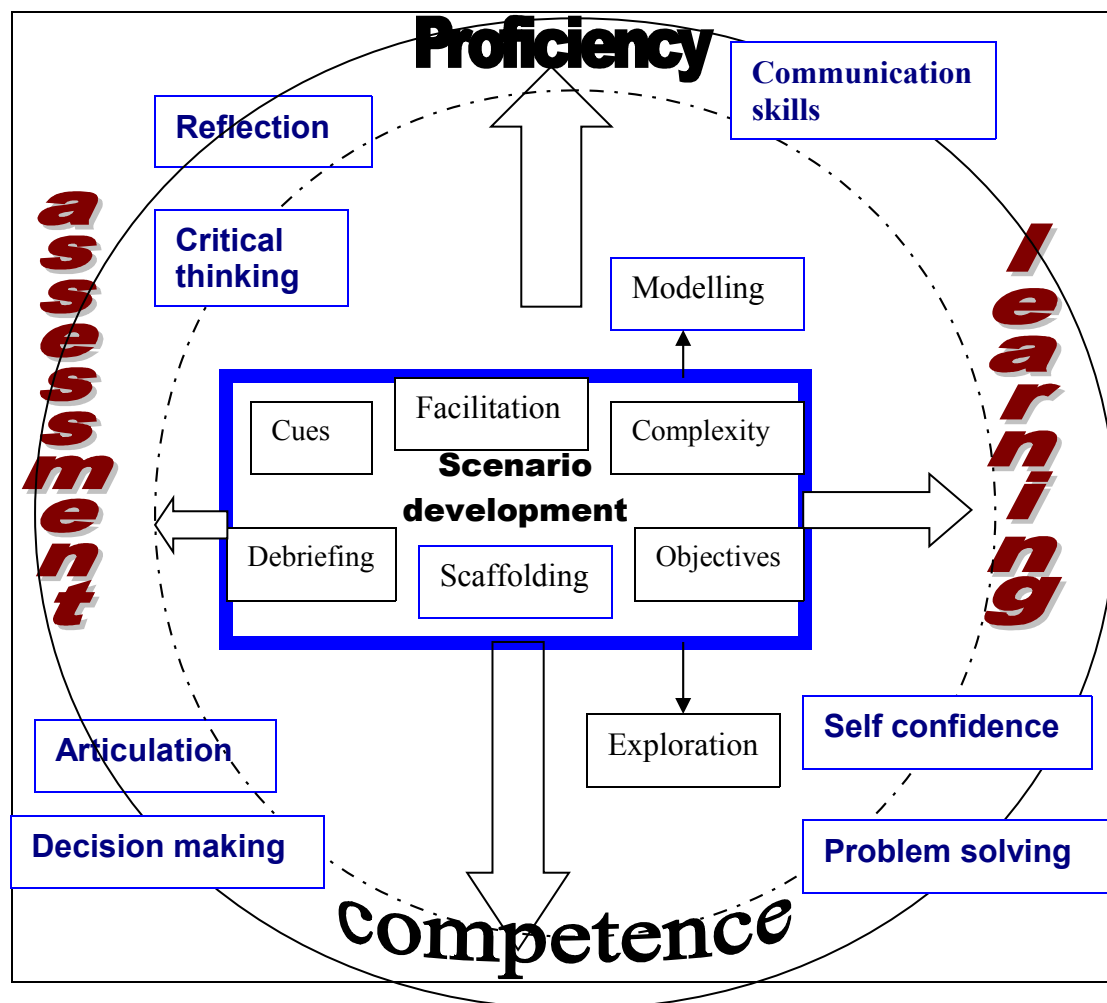
Scenarios and clinical skills acquisition

Debate exists as to the factors affecting the acquisition of clinical skills through simulation, raising the notion that clinical skills acquisition is achieved through an effective balance between fidelity of equipment, fidelity of experience, fidelity of the environment (Alinier et al., 2004; Maran and Glavin, 2003; Schwirth and van der Vleutin, 2003). From the perspective of the professional and regulatory bodies, Government policies and competency frameworks (DH 2004), in healthcare, there is consensus that safe and effective care is of prime concern to all. Globally there is a growing focus, within healthcare, for efficiency, technological advancement, enhanced quality and cost containment (Fawcett, 2006; Hunter, 2008) thus promoting the ideal of a cohesive framework for healthcare, through the development of measurable standards, risk reduction and improved patient safety (Hunter, 2008).

Simulated learning through the utilisation of clinical scenarios enables the development of conceptual understanding through problem solving of real world issues (Wooley & Jarvis, 2006). A key benefit of simulated learning is that mistakes can be made and rectified, with problem solving skills developed through engagement with “expert” practitioners either in the virtual or real world (De Bruijn, 1995), however one could question “who is the expert?”, “what is expertise”?, and should practitioners be competent, proficient or both?”

In the light of the above, this author proposes that a holistic model for skills acquisition (as demonstrated in figure 1) involving both key transferable skills and the stages of scenario development may offer a clearer explanation of how clinical skills are developed so that practitioners are competent to practice safe and effective care. Scenario development and delivery is integral to the development of proficiency and competence through effective learning and assessment strategies (Dent, 2002), to meet the requirements of Professional and Regulatory Bodies and the Department of Health (2004) thus reducing risk and enhancing safety. This model embraces the hierarchical nature of skills acquisition (Alinier, 2003), where practitioners move from knowledge to being able to contextualise situations and solve problems in light of the existing evidence base.

Figure 1 Holistic model for clinical skills acquisition



Scenario complexity

A potential barrier to implementing simulation in healthcare is the technical nature of simulation, this is enhanced by the perception that the time, effort and skill involved in developing, validating, and then experimenting with a simulation scenario are not worth the expected benefits (Jeffries, 2005).

The time and skill level required for scenario building is certainly decreasing as the power and flexibility of available simulation software increases. Nevertheless, the construction and conduction of carefully designed scenarios can be a significant pressure on staff, even for a relatively simple scenario. Healthcare today is in a state of rapid change, and practitioners cannot afford to spend too much time developing systems that are going to be outdated as soon as they are completed. Thus, the opportunity to work with student nurses in the Summer School is timely in that it encourages them to embrace the rapidly changing nature of healthcare, bring their own experiences of practice to develop scenarios and utilise their own information technology skills, thus adopting the steps advocated by Wilford & Doyle (2006) in the development of clinical scenarios.

Student preparation for the summer school

Prior to students' attendance at the Summer School, two monthly (April and May 2010) briefing sessions were given by nurse educators at the respective Higher Education Institutes. One of the aims of these sessions was to encourage students to use their placement experiences to 'identify' the type of scenarios they wished to bring to the group work activities, whilst acknowledging anonymity in accordance with the Nursing and Midwifery Council guidance on consent and confidentiality (NMC, 2008a). Guidance on how to develop scenarios approach and a checklist (see table 1) was created to enable students to prepare for this aspect of the project.

Mindful of the need to keep simulation models "constructively simple" (Salt, 1993), briefing sessions emphasised that clinical scenarios can be further developed over time to layer the scenarios complexity and enhance a greater

range of clinical skills. Facilitators were aware of the requirement to address the needs of a European audience, where cultural differences and protocols for care vary across national boundaries, thus acknowledging that the development of clinical scenarios with and *for* any group is complex.

To address these concerns and to ensure an effective learning experience, certain key questions needed to be asked prior to developing the scenarios (see checklist in table 1).

Table 1: checklist for scenario development (adapted from Jeffries, 2005):

Questions
1. Is it necessary to develop a scenario?
2. What were the goals of the experience?
3. Is there an assessment component to the simulation?
4. What is the context of the patient simulation learning experience?
5. What is the level of the students?
6. What program are the students on?
7. How much time is allotted for the scenario?
8. How many students will be assigned to each scenario?
9. Have the students had previous experience with the patient simulator? If so, how much?
1. How many faculty/staff are available to assist with the scenario?
0.

1 What type of environment is needed to represent the clinical setting
1. for the scenario?

1 What audiovisual equipment is needed and available?
2.

1 Is there time for debriefing? Who is responsible for debriefing the
3. learners?

A programmed scenario was given as a starting point for scenario development, as this enabled students to understand the context of scenarios and allowed them to elaborate and embellish it, including information to make it seem more authentic (Jefferies, 2005). The scenario could then be used with a patient simulator in conjunction with other instructional strategies such as layering the case study or problem-based learning activities.

The goals of the learning experience were explicitly identified through primary and secondary learning objectives. For example, one of the primary goals was for students to identify physiologic responses to an exacerbation of Chronic Obstructive Pulmonary Disease (COPD). As the students were at varying stages in their training from year one to three of their pre-registration programmes it was envisaged that a layered approach to scenario development would be facilitated from year one students through to qualified practitioners, with increasing levels of complexity. As educational facilitators, it was important to consider what other teaching points could be incorporated into the case by adopting a holistic approach to scenario development.

It was recognised that formal assessment of simulated learning may be problematical due to the performance anxiety this may engender particularly when having to present their work to peers from other HEIs. Thus, for the Summer School, formal assessment of students learning was not expected.

However, to foster team working and resourcefulness as well as cultural diversity students were expected to present their clinical scenarios in groups on the penultimate day of the summer school, and this was highlighted as an objective of the summer school at induction. Each presentation was judged by a panel comprising representatives from their respective HEIs. Each received some feedback for the work undertaken and prizes for the best three clinical scenarios were given, with each student given a certificate of participation.

Discussion

Learning situations, such as the International Summer School, encourage students to have diverse life views and expectations, which can be truly ambivalent and heterogeneous, and influence their value system greatly. In multi-cultural societies, the cultural values of individuals already residing within a country can be substantial, and are reflected within certain work groups (Rognstad et al., 2004). It is important to recognise that cultures that influence values are not unique to geographic areas but are also part of institutions, such as the culture of a hospital (Nichols, 2006; Jeffreys, 2006) and for our students their HEI.

When developing scenarios their clinical context must be considered, in terms of prior and experiential learning as they provide opportunity for synthesis of experience, where students can apply what they have learned previously to the current situation. A challenge for the students was that they were at different stages in their training and were not all studying adult nursing, however this facilitated greater creativity and a move away from a focus on physical care to embrace a holism that included psychological and sociological aspects of care.

The time allocated for the simulation experience, twenty minutes, was identified at the start of the scenario development, in recognition that the more complex the scenario, the greater the time required for completion. This will enable small groups, of no more than five to six students, thus allowing consideration of the number of roles that students can assume and the tasks to be accomplished.

Hands on orientation to the equipment and the technology, as advocated by Alinier (2004), for all participants was recognised as essential prior to participation in scenario development to enhance efficiency of development and reduce potential performance anxiety levels in the student developers.

Debriefing is a critical part of participating in simulated patient scenarios (Long, 2005), and should be a requisite for scenario development as part of the reflective nature of teaching and learning and should be facilitated by staff who have a good understanding of their students stage of training and level of understanding. Educators therefore require the time and facilities for scenario development, with the ideal that students are embraced in this process, as the promotion of clinical skills acquisition and knowledge involves all the domains of learning.

Conclusion

This project demonstrates that students experiences can be effectively used to develop and enhance simulated learning experiences and scenario development. Simulated learning requires scenarios that provide visual, tactile and auditory experiences that healthcare professionals experience in their everyday working lives. Students are socialised into their chosen profession in practice areas however simulated learning experiences enable them to explore real practice situations in a safe environment where mistakes can be made without putting real patients at risk. Students participating in this summer school have been able to gain a wider appreciation of the global healthcare economy and develop key transferable skills to enhance patient

care. Student feedback has highlighted the value of inter-professional learning and networking with students from other countries. The academic team would advocate future summer schools to facilitate the development of healthcare practitioners who are able to value the global nature of healthcare and the challenge that a mobile workforce brings.

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