Exploring Simulation Utilization and Simulation Evaluation Practices and Approaches in Undergraduate Nursing Education
Research Team

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Simulation is becoming one of the most significant teaching-learning strategies in undergraduate nursing education.

Through the development, application, and evaluation of high quality simulation experiences (including high-fidelity, medium-fidelity, and low-fidelity), learners are able to acquire and demonstrate the knowledge and skills necessary for safe, competent, and ethical nursing practice.

By approximating clinical practice within nursing education, simulation provides real-time opportunities for students to work through complex patient-care situations, ideally receiving evaluative feedback that promotes increased confidence and competence.

(Cant & Cooper, 2010; Norman, 2012; Rickets, 2011)
Current Context to Simulation

▷ Increasing focus on patient safety (Decker et al., 2008; Jansson, Kaarianinen, & Kyngas, 2013)

▷ The shift to higher acuity and increased complexity of hospital and community-based patients (CASN, 2007; Rickets 2011)

▷ Increased student enrolment and faculty shortages in nursing programs in Canada (CASN, 2007)

▷ Dwindling numbers of clinical placement opportunities with high competition for both placements and preceptors between various nursing and allied health programs in Canada (CASN, 2007; Norman, 2012; Todd et al., 2008)
Increasing attention directed toward high stakes and remediation simulation as areas for further development (Boulet, 2008; Gantt, 2013; Sullivan, 2014)

Increasing demand to ensure safety with high risk, low frequency skills (Wolfgram & Quinn, 2012)

Recommendations for the creation of shared forums for discussing challenges and solutions to clinical placement issues and advancing innovative clinical placement strategies in Canada (CASN, 2007; Smith et al., 2007)
Current Context to Simulation continued

- The National Council of State Boards of Nursing (NCSBN) National Simulation Study: A Longitudinal, Randomized, Controlled Study Replacing Clinical Hours with Simulation in Prelicensure Nursing Education (Hayden et al., 2014)

- The results of this study provide evidence that up to 50 percent of clinical hours can be safely substituted by high-quality simulation experiences to produce comparable end-of-program educational outcomes and ready-to-practice graduates (Alexander, et al. 2015; Hayden et al., 2014)
Issue

▷ As the use of simulation increases in nursing education, the need to evaluate students appropriately, accurately, and in reliable ways intensifies (Todd et al., 2008)

▷ Yet, ample, robust evidence that supports the effectiveness of simulation for learning and evaluation in nursing education has yet to be fully established (Rickets, 2011)

▷ There is a lack of comprehensive data that describes common approaches and practices in relation to the evaluation of simulation practices and approaches (Leighton, 2013)
Issue continued

▷ There is little available data broadly, and no available data in Ontario, describing simulation utilization and simulation evaluation in undergraduate nursing education

▷ Developing comprehensive insight into current nursing educational practices and approaches in relation to the utilization and evaluation of simulation for nursing education is a critically important undertaking, necessary to solidify the foundation for future development of the science of simulation for nursing education
Study Purpose

The purpose of this study is to investigate simulation utilization and simulation evaluation practices used among all undergraduate nursing educational programs in Ontario, Canada.

In so doing, study findings will establish a “picture” of current trends, practices, and approaches related to simulation utilization and evaluation of simulation that are employed in Ontario.
Methods

▷ Sample group includes all undergraduate nursing educational programs in Ontario, Canada - a total of 36 educational institutions (14 universities along with 22 college partners who are involved in either independently or collaboratively offering baccalaureate degrees in nursing)

▷ Ontario nursing programs include direct entry programs (4 years) and compressed/accelerated, second entry BScN, or bridging RPN to BScN programs (2 or 3 years)

▷ A mixed methods approach was used, including both quantitative and qualitative data collection through a confidential online 52 question survey
Methods continued

▷ Letters of invitation with a link to the survey were sent by email to academic deans and leaders with a request to complete the survey or pass it on to other faculty (simulationists, technologists or technicians, faculty, staff, leaders) who would be most knowledgeable about the use and evaluation of simulation in their program.

▷ Individual informants or a team of informants could choose to complete the survey.

▷ For early findings, qualitative responses were analyzed to identify common themes and quantitative responses were analyzed using descriptive statistics.
Survey Tool: Areas of Inquiry

- **PART A: Program Information**
- **PART B: Overview of Simulation Inclusion in Undergraduate Nursing Programs** (i.e. simulation modalities - high, medium, low fidelity employed and to what degree)
- **PART C: Simulation Foci in Undergraduate Nursing Programs** (i.e. fields of nursing or populations/patient groups focused on or clinical or non-clinical courses that include simulation)
- **PART D: Simulation Evaluation Practices** (if and how programs evaluate various components of simulation for learning)
  - Formative, summative, high stakes and remedial evaluation
  - Student evaluations of the simulated learning
  - Evaluation practices focusing on the simulation itself
  - Evaluation of personnel involved in teaching-learning with simulation
Emerging Study Findings

Total Response Rate: 41.7%

- 35 responses in total
- 24 participants completed a survey
- 15 institutions, including 8 colleges and 7 universities represented
Types of simulation used in Ontario nursing programs

Of responding colleges and institutions:

▷ High Fidelity 100%
▷ Medium Fidelity 100%
▷ Low Fidelity 100%
New Simulation Hours in 2013-2014?

40% Yes  60% No
Reason for Increasing Simulation Hours

- Increased enrollment: 5.00%
- Student requests: 5.00%
- Faculty requests: 10.00%
- Curriculum changes: 15.00%
- Agency changes: 10.00%
- Limited preceptors: 5.00%
- Limited placements: 5.00%
- More simulation expertise: 20.00%
Planning for More Simulation Hours in 2014-2015?

- Yes: 87%
- No: 13%
Reason for **Planning to Increase Simulation Hours**

- Increased enrollment
- Student requests
- Faculty requests
- Curriculum changes
- Agency changes
- Limited preceptors
- Limited placements
- More simulation expertise
Use of Simulation for Replacement of Clinical Hours

- Yes: 47%
- No: 53%
Reason for Replacing Direct Clinical Hours with Simulation Hours

- When placements were unable to take students: 14.00%
- As a pilot to replace direct clinical hours: 2.00%
- As an established practice: 16.00%
What % of Clinical Hours Do You Consistently Replace with Simulation?
How Many Hours of Simulation Replace 8 Hours of Direct Clinical?
Next Steps

▷ Continue to collect survey responses from universities and colleges

▷ Further data analysis

▷ Continue building a “picture” of current trends, practices, and approaches related to simulation utilization and evaluation of simulation that are employed within Ontario

▷ Investigate learners’ experiences of simulation, especially in light of use of simulation as clinical replacement

▷ Develop and hold a forum with representatives from Ontario nursing programs to discuss current practices and challenges and to generate solutions
Thanks!

Any questions?

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References


References continued


