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TRANSFORMING NURSING EDUCATION
LEADING THE CALL TO REFORM

A Vision for Teaching with Simulation

*A Living Document from the National League for Nursing
NLN Board of Governors*

April 20, 2015

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Mission: Promote excellence in nursing education to build a strong and diverse nursing workforce to advance the health of our nation and the global community.

Core Values: Caring, Integrity, Diversity, Excellence

Introduction

For more than a decade, the NLN has promoted simulation as a teaching methodology to prepare nurses for practice across the continuum of care in today's complex health care environment. That experience reinforced by the League's mission and core values furnishes a strong foundation to address the challenges and opportunities arising from the use of simulation in nursing education.

Simulation can take many forms, including human patient simulation using manikins and/or standardized patients, virtual and computer based simulations, simulation done to teach psychomotor skills, or role play (Society for Simulation in Healthcare, 2015). Simulation provides a rich learning opportunity for students to integrate theory with practice while making real-time clinical decisions in an environment that poses no risk to patients.

The National Council of State Boards of Nursing (NCSBN) landmark, multi-site, longitudinal, study explored the role and outcomes of simulation in pre-licensure clinical nursing education in the United States (Hayden, Smiley, Alexander, Kardong-Edgren & Jeffries, 2014). The NLN [endorses](#) the study findings which concluded that there is substantial evidence that simulation can be substituted for up to 50 percent of traditional clinical experiences under conditions comparable to those described in the study.

Simulation creates transformational learning experience for all nursing students and provides diverse perspectives on caring for patients across the continuum of care. Learning in simulation allows for situated cognition – or learning in context – a concept at the forefront of contemporary educational reform. As teachers and learners move away from content-laden curricula to curricula that emphasize experiential learning, it is critical that nurse educators have the requisite knowledge and skills to use simulation to its full potential. An element of learner self-reflection is core to all methods.

Background and Significance

In 2003, the NLN conducted the landmark simulation study “Designing and Implementing Models for the Innovative Use of Simulation to Teach Nursing Care of Ill Adults and Children: A National Multi-Site, Multi-Method Study” (Jeffries & Rizzolo, 2006). This study resulted in the development of the NLN/Jeffries Simulation Framework, widely used as the theoretical foundation for research in simulation use and efficacy, both nationally and internationally. Since then, the NLN published a revised version of the framework (Jeffries and Rogers, 2012) and developed and disseminated many tools to help faculty teach with simulation:

- [The Simulation Innovation and Resource Center \(SIRC\)](#), a comprehensive website providing education and support to advance simulation in nursing education, was launched in 2007.
- More than 50 evidence-based simulation scenarios that guide faculty use of simulation throughout schools of nursing in the US and around the world.
- [The Leadership Development Program for Simulation Educators](#) began in 2011; more than 100 simulation leaders have participated in the program.

Recent advances in simulation technology and pedagogy allow nurse educators to facilitate experiential learning in ways unimaginable when the first patient simulator, “Mrs. Chase,” was delivered to the Hartford Hospital Training School for Nurses in 1911. Today simulation is more than a way to teach and practice psychomotor skills. It is an evidence-based strategy to facilitate high-quality experiences that foster thinking and clinical reasoning skills for students. The emphasis is on creating contextual learning environments that replicate crucial practice situations. Now more than ever –with changes in health care access and technological advances in health care delivery, the increasing complexity of patient care, and the growing lack of clinical placements for students – it is imperative to embed quality simulation experiences throughout the program of learning.

Practice Trends Influencing the Use of Simulation in Nursing Education

- Data confirming medical errors have driven patient safety to the forefront of health care reform. Through the incorporation of concepts from the Quality and Safety Education for Nurses (QSEN) initiative (Cronenwett, Sherwood & Gelmon, 2009), nursing education is placing more emphasis on teaching the importance of patient safety. The literature supports that simulation-based education with deliberate practice is effective in achieving specific clinical goals related to

patient safety (McGaghie, Issenberg, Cohen, Barsuk, & Wayne, 2011).

Interprofessional education and [collaborative practice](#) are seen as key in achieving safe, high quality, accessible patient-centered care. Simulation that is focused on interprofessional learning objectives provides the opportunity for nursing students to learn with, from, and about their peers in other healthcare disciplines (Interprofessional Education Collaborative, 2011).

Factors Informing the Expanded and Consistent Use of Simulation

- Passive learning approaches are being replaced by **experiential learning**, i.e., active learning approaches whereby students become the center of the teaching and change from mere consumers of education to engaged active learners (Jeffries & Clochesy, 2012). Unique challenges exist for the educator to devise teaching strategies that move from highly structured to self-directed learning and reactive thinking to critically reflective proactive thinking. Contextualized learning brings classroom and clinical together; simulation engages learners with diverse perspectives to reflect and reframe the understanding of practice, bringing thinking and doing together.
- Schools of nursing are increasingly challenged to provide high quality **clinical experiences** for students. Educators have turned to simulation as a way to provide rich learning experiences that can replicate actual clinical experiences. Simulation can standardize clinical experiences in this time of unpredictable and often unequal clinical learning opportunities. The NCSBN study (Hayden, et al., 2014) highlights simulation's success as a teaching tool, e.g., student achievement on content-focused, end-of-course exams, and their development of clinical reasoning skills similar to those achieved in traditional clinical experiences.
- **Guidelines and quality measures** for simulation programs and facilitators have been published by both the International Nursing Association for Clinical Simulation and Learning (INACSL) and the Society for Simulation in Healthcare (SSH). The [INACSL standards](#) (2013) provide guidance on: terminology, the professional integrity of participants, participant objectives, the facilitator, facilitation, debriefing, and participant assessment and evaluation. [SSH standards](#) relate to the certification of health care simulation educators (2012) and the accreditation of simulation centers (2014).
- It is important to **evaluate simulation programs and facilitators** for their ability to support program outcomes and organizational goals. Used to drive continuous quality improvement, three evaluation perspectives are valuable when assessing the quality of simulation based education:
- Evaluation of individual simulation experiences by both faculty and learners ensures that the simulation experience contributes to meeting course and/or program outcomes.

- Evaluation of the simulation program helps underpin the integration of simulation into a nursing curriculum as a whole.
- Evaluation of the simulation facilitator affects the quality of the simulation experience and validates the competence of the facilitator.
- Evaluation of learning outcomes along with evaluation of the simulation facilitator is accomplished using **reliable and valid instruments**. Though existing published instruments with psychometrics should be used when appropriate (Adamson, Kardong-Edgren, & Willhaus, 2013), simulation programs may choose to create their own if no previously validated tools exist to accomplish their objective. [Ensuring the validity and reliability](#) of the instrument is integral to the development process; instruments that lack them should not be used.
- Standards of practice, accreditation standards, and evidence from NCSBN make it clear that simulation requires **specialized faculty development resources**. The creation of simulation programs should include the development of simulation leaders to help faculty integrate the programs into the curriculum. Also critical are resources for faculty development, allocation of faculty workload hours to support best practices, and the provision of an appropriately realistic environment (Jeffries, Dreifuerst, Kardong-Edgren, Hayden, 2015).
- Curricular changes should include curriculum maps and blueprints to be used by **simulation teams** of faculty (Jeffries, Dreifuerst, Kardong-Edgren, & Hayden, 2015). Responsible for developing, facilitating, and evaluating the experience, these teams use specific skills to create a realistic and pedagogically sound experience using an applicable theory or framework. When guiding the simulation experience and subsequent debriefing, faculty should provide formative or summative evaluation of simulation participants. In order for nurse educators to meet these responsibilities, additional personnel are needed to provide administrative and operational support.
- Simulation and debriefing teaching techniques are not limited to clinical encounters in the simulation laboratory. As faculty teams bring case studies to life in the classroom with virtual simulations, standardized patients, and human patient simulators, they can facilitate simulation and debriefing that supports didactic content. Similarly, the **use of theory-based debriefing** enhances the educator's ability to assess learning needs and close performance gaps in multiple settings (Hayden et al., 2014).

Call to Action

The increasing body of evidence supporting the effectiveness of simulation in health care education engenders a call to action. The NLN has identified key strategies and

resources to address the need for a more contextual, experiential type of learning through simulation:

- Core and advanced courses in simulation for faculty to acquire the foundational knowledge needed to begin using simulations as a valuable learning tool are available on the [SIRC](#).
- [The NLN Advancing Care Excellence for Seniors \(ACE.S\)](#) and for [Veterans \(ACE.V\)](#), web pages offer free teaching-ready unfolding cases based in simulation.
- Collaborative efforts have resulted in the creation of [simulation scenario sets](#) and a virtual simulation product. [vSim for Nursing](#)
- [Two debriefing courses](#) for faculty are offered through the SIRC as well as an [annotated bibliography](#) highlighting recent advances in simulation debriefing techniques and outcomes
- The NLN's Leadership Institute offers a [year-long leadership program for simulation educators](#).

Recommendations

For Deans, Directors, Chairs of Nursing Programs

- Create strategic partnerships with schools and clinical agencies to capitalize on shared simulation resources.
- Ensure an adequate number of dedicated simulation faculty with training and expertise in the pedagogy of simulation.
- Include operational support staff as a part of the simulation team.
- Budget annually for faculty development in simulation pedagogy and theory based debriefing.
- Support the development of simulation leaders among the faculty.

For Nurse Faculty

- Purposefully integrate simulation into the curriculum with clear connections toward achievement of student learning outcomes.
- Incorporate simulation standards of practice in the design, implementation, and evaluation of simulation-based experiences.
- Use evidence-based consistently to ensure competence in debriefing.
- Partner with faculty from other disciplines to create interprofessional simulation

experiences.

- Pursue the development of expertise as a simulation leader.

For the NLN

- Provide professional development resources for faculty to:
 - Incorporate standards of practice in simulation pedagogy and theory based debriefing
 - Integrate simulation into nursing curricula
 - Enhance faculty expertise in the use of theory based debriefing in simulation.
 - Evaluate simulation experiences using valid and reliable instruments.
- Collaborate with key stakeholders (e.g., INACSL, SSH, NCSBN, Laerdal, Wolters Kluwer) to develop and disseminate best practices in the use of simulation in teaching and learning and integrating debriefing into learning activities throughout the curriculum to better engage students in the learning process.
- Provide opportunities for the development of simulation research scholars through the [NLN Center for Innovation in Simulation and Technology](#).
- Increase support of multi-site research studies in simulation pedagogy.
- Partner with simulation scholars and nurse theorists to study and further develop the NLN/Jeffries Framework.

References

Adamson, K. A., Kardong-Edgren, S., & Willhaus, J. (2013). An updated review of published simulation evaluation instruments. *Clinical Simulation in Nursing*, 9(9), e393-e400.

Cronenwett, L., Sherwood, G., & Gelmon, S. B. (2009). Improving quality and safety education: The QSEN Learning Collaborative. *Nursing Outlook*, 57(6), 304-312.

Hayden, J. K., Smiley, R. A., Alexander, M., Kardong-Edgren, S., & Jeffries, P. R. (2014). Supplement: The NCSBN National Simulation Study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *Journal of Nursing Regulation*, 5(2), C1-S64.

International Nursing Association for Clinical Simulation and Learning. (2013). Standards of best practice: Simulation. Retrieved from <http://www.inacsl.org/files/journal/Complete%202013%20Standards.pdf>

Interprofessional Education Collaborative. (2011). Core competencies for interprofessional collaborative practice. Retrieved from <https://ipecollaborative.org/Resources.html>

Jeffries, P. R., & Clochesy, J. M. (2012). Clinical simulations: An experiential, student-centered

pedagogical approach. In D. M. Billings & J. A. Halstead (Eds). *Teaching in nursing: A guide for faculty* (4th ed., pp. 352-368). St. Louis, MO: Elsevier Health Sciences.

Jeffries, P. R., Dreifuerst, K. T., Kardong-Edgren, S., & Hayden, J. (2015). Faculty development when initiating simulation programs: Lessons learned from the National Simulation Study. *Journal of Nursing Regulation*, 5(4), 17-23.

Jeffries, P. R., & Rizzolo, M. A. (2007). Designing and implementing models for the innovative use of simulation to teach nursing care of ill adults and children: A national, multi-site, multi-method study [Summary Report]. In P. R. Jeffries (Ed.), *Simulation in nursing education: From conceptualization to evaluation* (Appendix A, pp. 147-159). New York, NY: National League for Nursing.

Jeffries, P. R., & Rogers, K. J. (2012). Theoretical framework for simulation design. In P. R. Jeffries (Ed.), *Simulation in nursing education: From conceptualization to evaluation* (2nd ed., pp. 25-41). New York, NY: National League for Nursing.

McGaghie, W. C., Issenberg, S. B., Cohen, M. E. R., Barsuk, J. H., & Wayne, D. B. (2011). Does simulation-based medical education with deliberate practice yield better results than traditional clinical education? A meta-analytic comparative review of the evidence. *Academic Medicine*, 86(6), 706.

Society for Simulation in Healthcare. (2012). Certification standards. Retrieved from <http://www.ssih.org/Portals/48/Certification/CHSE%20Standards.pdf>

Society for Simulation in Healthcare (2014). Accreditation standards. Retrieved from http://www.ssih.org/Portals/48/Accreditation/14_A_Standards.pdf

Society for Simulation in Healthcare (2015). About simulation. Retrieved from <http://www.ssih.org/About-Simulation>