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Opinion Name:	**Use of Simulation in Approved RN/LPN Programs**
Approved Date:	**5/15/15**
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Within the Scope of Practice for:	**RNs, LPNs**
Originating Committee:	**Education Committee**

ADVISORY OPINION
EDUCATION USE OF SIMULATION IN APPROVED RN/LPN PROGRAMS

DEFINITIONS

For the purposes of this advisory opinion only:

1. **Augmented Reality** - Overlays digital information on objects or places in the real world to enhance the user experience (Lopreiato, 2020).
2. **Debriefing** - A bio-directional conversation session following a simulation event to explore emotions, provide guided reflection, and feedback aimed at sustaining or improving future performance (Palaganas, J.C, 2016). The debrief is congruent with the objectives and outcomes of the simulation-based experience to foster critical thinking and clinical reasoning (INACSL Standards of Best Practice: Simulation Debriefing, 2021).
3. **Deliberate Practice** - An authentic learning experience based on real-life experience; a specific type of practice that is both purposeful and systematic, requires focus and is conducted with the singular goal of improving skill development and performance (Welch & Carter, 2018).
4. **Evaluator** - A person trained to assess simulation performance using a pre-planned and structured method.
5. **Evaluation Types of Simulation-based experiences will vary**
    a. Formative evaluation is conducted to facilitate teaching and learning, identify and close gaps in knowledge, skills, and attitudes, monitor progress, develop clinical competencies, and to provide ongoing feedback. This type of evaluation is used to foster development and assist with achieving outcomes or competencies.
    b. Summative evaluation is conducted to evaluate learning, skill acquisition, academic achievement, establish competence, promote patient safety, and to provide feedback at the conclusion of the evaluation. This type of evaluation is used to measure outcome achievement at a discreet point in time such as at the end of a course or program.

c. High-stakes evaluation is conducted to determine competency, gaps in knowledge, skills, behaviors, and/or to identify safety issues for remediation. If using an observation-based instrument, using more than one rater/evaluator should be considered. This type of evaluation is an assessment that may have significant implications or consequences based on the result of the evaluation(s).

6. **Facilitator** - An educator involved in the delivery and or implementation of simulation pedagogy. The educator has the "knowledge, skill, and ability to guide, support, and seek out ways to assist participants in achieving expected outcomes" (INACSL Standards Committee, et al., 2021d, 22).
7. **Orientation** - Usually part of the prebriefing where participants are shown how all the equipment in the simulation room operates to include but not limited to the Manikin, IV pumps, Med carts, phones, patient monitors, suction/oxygen walls, camera locations, etc. (Healthy SIM, 2017, pg. 2).
8. **Prebriefing -** A critical component of the simulation process which involves preparation and briefing, ensuring that learners are prepared for the content and aware of the ground rules for the simulation experience (INASCL Standards Committee, et al, 2021b).
9. **Simulated high-fidelity simulator -** Provides realistic, life-like device (e.g. software driven manikin) or rendering (e.g. 3D computer generated photorealistic image) that accurately mimics human anatomy and physiology to interact with students engaged in learning activities.
10. **Simulated participant/patient** is a general term that includes participants trained to portray a variety of roles, e.g., patient, family members, and healthcare professionals (Lewis et al., 2017).
11. **Simulation -** "Clinical situation replicated in which participants need to use all or some of their assessment, psychomotor, critical thinking or managerial skills in an attempt to mimic essential aspects of a clinical situation with the goal of understanding and managing the situation better when it occurs in actual clinical practice." (NLN-SIRC, 2019). *The Board recognizes that there are broader definitions of simulation, however to meet clinical learning objectives, simulation must realistically mimic the patient care environment.*
12. **Simulation observation** means a structured learning experience based on watching a live or video-recorded simulated performance. Simulation observation can assist individuals with meeting course objectives (Johnson, 2019).
13. **Simulation performance** means active participation in the provision of nursing care with or without interprofessional colleagues in a simulated environment.
14. **Simulation technician** may be trained to operate the equipment, but possibly not have the required credentials to evaluate or provide feedback, nor the expertise in conducting a simulation that requires independent, expert knowledge.
15. **Simulationist** is a person with formal training who is involved in the design, implementation, and/or delivery of healthcare simulation activities (Carey, 2021).
    a. Simulationist Code of Ethics is a set of values to support the quality and ethical practice of healthcare simulation. The six aspirational values are integrity, transparency, mutual respect, professionalism, accountability, and results orientation (Society for Simulation in Healthcare, 2019).

16. **Standardized patient/participant** is a specific term for a person that portrays a patient in a highly standardized and realistic manner. Standardized patients are often used in high stakes assessments (Lewis et al., 2017).

17. **Validity** refers to "the degree to which evidence and theory support the interpretations of test scores for proposed uses of tests" (AERA, APA, & NCME, 2014, p. 11). Various sources of evidence, e.g., content, criterion-related, and construct validity, are used to support data validation.

18. **Virtual Reality** "A computer-generated three-dimensional environment that gives an immersive effect" ("Virtual reality", 2016, pg. 41).

POLICY STATEMENT

Approved RN and LPN programs may use simulation, along with actual patient care, to meet clinical objectives. Consistent with A.A.C. R4-19-206 (D)(2), simulation may not be used for an entire clinical experience. Programs providing simulated clinical patient care hours need to carefully evaluate whether the number of patient care hours is sufficient to apply core principles of nursing to each population as required in R4-19-206 (D)(2). If clinical time in a specialty is limited, simulation may only be used to augment patient care hours. In such situations, substitution of any clinical time for simulation may result in both inadequate simulation and inadequate actual patient care experiences. Programs considering substituting all clinical hours for a given specialty with simulation must request a rule exemption under R4-19-214, Pilot Programs for Innovative Approaches in Nursing Education.

Programs incorporating simulation are expected to adopt best practices such as the standards of the Healthcare Simulation Standards of Best Practice also known as the, International Nursing Association for Clinical Simulation and Learning (INACSL, 2021) or the most current version in its entirety. Programs are encouraged to explore the use of additional evidence-based theoretical frameworks and models that support successful achievement of simulation objectives.

Programs who meet the criteria may elect to integrate simulation, using simulators or standardized patients, for a portion of clinical time if the following requirements are met:

GENERAL GUIDELINES

1. Programs that use simulation in conjunction with clinical-based patient care need to do so using current best practice standards. Other evidence-based practices may also be incorporated.
2. It is recommended that simulation scenarios be integrated within the program's curriculum following a needs assessment, pilot test, or validation prior to implementation (INACSL, 2021c).
3. All students participating in simulation should have equivalent opportunities to perform in the role of the nurse.
4. Unless conducting institutional review board (IRB) approved research or a Board approved innovative program under R4-19-214, all clinical groups in a particular course should receive equivalent amounts and quality of simulation.
5. Simulationists and/or facilitators should be prepared to respond appropriately to the psychological impact of simulation on students.
6. Task trainers and two dimensional virtual clinical programs may be used in conjunction with medium and high-fidelity simulation scenarios depending on the objectives of the simulation.
7. Verbalization in place of performing psychomotor skills that are a critical part of simulation scenario objectives should occur only when the limits of current technology prevent actual performance of the skill.

8. Simulated scenarios should address course competencies/objectives and are suggested to include high risk/low frequency healthcare situations as appropriate.
9. Simulation-based education (SBE) review is part of the systematic plan of evaluation (SPE) for the program and will have an identified review/revision/evaluation cycle (HSSOBP, 2021).

***ONLY* when guidelines are met may the following be applied**

1. Simulation Hours
    a. Simulation may replace clinical practice time up to 50% per specialty (INACSL, 2021).
2. Simulation-to-clinical practice ratio up to 1:2
    a. Structured, rigorous simulation that is 1 hour in length equates to 2 hours in a clinical/healthcare setting (clinical practice)

Planned curriculum example:

1. Once the total number of clinical practice hours are determined (i.e.100 hrs.)
2. Determine the number of simulation hours needed to meet the objectives, consider:
    a. 50% of clinical practice hours is the maximum simulation hours permitted (i.e. 50 hrs.)
    b. 1:2 ratio - (i.e. 25 hrs. of simulation are equivalent to 50 hrs. spent in a clinical setting)

(Sim time x 2)	+	(Clinical Practice time x 1)	=	Total Clinical Practice
(25 hrs. x 2)	+	(50 hrs. x 1)	=	Total Clinical Practice
50 hrs.	+	50 hrs.	=	100 hrs.

Recap: If the total clinical practice time must equal 100 hours, then 25 hours of simulation and 50 hours at a clinical/healthcare setting would meet this criterion.

NOTE - In this example, the simulation time represents 50% of total clinical time, and the simulation to clinical ratio is 1:2

BEST PRACTICES FOR SIMULATION

A. Personnel

The use of simulation requires faculty/simulationists/facilitators that are appropriately trained in simulation and may require additional faculty and personnel to support the intended ~~use~~ competencies/objectives of the simulation (INASCL, 2021).

1. If simulation is used for teaching/learning (formative use), a minimum of 1 simulationist and/or facilitator per 4-5 students engaging in simulation performance is recommended. If simulation is used as a summative evaluation (see definition) for an individual student, a minimum of 2 evaluators for each student evaluated is recommended (Williams, Klamen, & McGaghie, 2003; INASCL Standard Committee, 2021h). Summative evaluations may be conducted by direct observation or by recorded video (INASCL, 2021).
2. Participating facilitators/faculty shall complete preparatory activities which include reading the assigned material, reviewing the objectives and being familiar with the evaluation criteria prior to and post participation.

3. If simulation observation is part of the experience, a qualified simulationist/facilitator is required to guide the observation students with structured active observation and focus on pertinent aspects of the simulation (INACSL, 2021).

B. Physical Resources and Policies

The use of simulation requires physical resources and policies that preserve the confidentiality of the student and security of the simulation scenario including all materials. Minimum requirements include:

1. Dedicated simulation space with observation/operator area.
2. Equipment of a fidelity/realism of experiences found in clinical settings.
3. Audio and video recording and playback capabilities that allow learners and faculty to review performance is recommended but not required for formative simulations. These components are strongly recommended for summative evaluations and required for high-stakes evaluations.
4. A separate room or area with remote access to the simulation is recommended if students are observing the simulation simultaneously.
5. Informed consent, confidentiality agreements and behavioral expectations for students and observers.
6. If students are allowed access to videos, proper measures should be taken to ensure confidentiality of case material and appropriate viewing of videos including simulated participants (when needed).

C. Learning Materials/Scenarios

The use of simulation requires that faculty adopt processes (i.e. templates, algorithms) and documentation forms for each scenario consistent with current standards, including:

1. Incorporation of specific learning objectives for each simulation scenario that aligns with clinical competencies/objectives and are of a level consistent with course expectations.
2. Competencies/objectives that include the required cognitive, affective and psychomotor skills.
3. Student/faculty preparation for the scenario including appropriate set-up, equipment, and faculty notes/instructions for the experience.
4. Outline that includes report, simulator actions, deliberate practice, patient cues, expected student roles and actions.
5. Scenarios that are inclusive and reflect the diversity of both the students and clients they will encounter in practice settings.
6. Validation of each scenario in its entirety prior to use.
7. Assignment of an active role to all students in the simulation room—e.g. nurse, family member, assistive personnel, focused observer, etc. Rotation of roles throughout simulation should occur.

8. Utilization of an evidence-based structured debriefing framework/rubric/guide consistent with current standards and of sufficient length of time to adequately provide feedback to students for each simulation activity (INACSL, 2021d).
9. Incorporation and assessment of student documentation for each scenario.

TRAINING REQUIREMENTS FOR FACILITATORS

Guideline Statement: Facilitating simulation scenarios requires skill in diagnosing learning needs and managing optimal group processes to validate evidence-driven, safe patient care. Simulationists and facilitators should have education, on-the-job-training, and competency assessment specific to their roles.

To meet this criteria, training of simulationists and/or facilitators should:

A. Be based on a curriculum incorporating best practices in simulation.

B. Include on-the-job training with an experienced simulationist and/or facilitator.

C. Include initial and ongoing education and professional growth opportunities that supports these criteria:

   a. includes specific skills and knowledge in simulation pedagogy.

   b. simulations are appropriate to the level of learning, experience, diversity, and competency of the participants.

   c. provides a physiologically safe environment for participants.

   d. includes preparatory activities and a prebriefing to prepare participants for the simulation-based experience.

   e. delivers cues (predetermined and/or unplanned) aimed to assist participants in achieving expected outcomes during learning activities and formative evaluations.

   f. facilitation of debriefing using structured evidence-based approach to support participants in achieving expected learning outcomes (INACSL, 2021d).

D. Simulationists and/or facilitators serving as evaluators should be qualified educators.

BASIC CHECKLIST FOR SIMULATION

Checklist for readiness for high-fidelity simulation for program use to replace clinical experiences.

Specific simulations may require additional items.

1. Must have items/processes for all simulations:

✔ Specific leveled objectives linked to desired outcomes for each simulation

✔ Written, planned simulations that allow student performers to achieve the objectives

✔ Manikins, standardized patients or other resources with fidelity consistent with the simulation objectives

✔ Audio and video recording and playback equipment in working order if required

✔ Dedicated simulation room or area

✔ Debriefing space that supports confidentiality

✔ Documentation system realistic to the health care environment

✔ Confidentiality agreements and signed consent

✔ Evidence-based structure for debriefing

✔ Validation of each simulation

✔ Validated assessment tool for evaluation of students performing the simulation

✔ Sufficient number of simulationists/facilitators for group size

✔ Supplies and equipment similar to those used in clinical settings as required by the simulation

2. Depending on the objectives of the simulation, these common items may be needed:

✔ Intravenous and Enteral delivery devices that are realistic and comparable to those used in health care settings

✔ Medication dispensing system

✔ Furnishings to provide an environment realistic to the setting of the simulation

✔ Durable medical equipment to support the simulation

✔ Disposable supplies—gloves, alcohol wipes, simulated medications, mediation supplies, etc.

✔ Patient monitoring system

✔ Hand hygiene/infection control systems

✔ Infectious waste and sharps disposal containers

✔ Safe patient handling equipment

3. For student observers the following are needed:

✔ Separate room with streamed video

✔ Structured assignments for each student

✔ Trained simulationists/facilitators to guide the observation experience

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