



RESOURCES SIMULATION

Created by the Professional Education Committee

The Professional Education Committee created two documents to provide members more information on simulation. The first document contains standard resources and definitions while the second details steps to creating meaningful simulation experiences.

These resources have been created by NATA committee members for the purposes of assisting the general membership-at-large. While we have attempted to provide resources that are both accurate and reflective of the information available at the time of creation, NATA makes no express or implied representation or warranty as to the information contained herein. NATA and the respective authors shall not be liable nor responsible to any person or entity with respect to any loss or damage arising from its use. Athletic trainers should consult and act consistent with all applicable laws, including local and state practice acts, and other rules and policies.

Health Care Literature

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Armstrong KJ, Walker SE, Jarriel A. Standardized patients, part 3: assessing student performance. *Int J Athl Ther Train*. 2011;16(4):40-44.

Armstrong KJ, Jarriel AJ. Standardized patient encounters improved athletic training students' confidence in clinical evaluation. *Athl Train Educ J*. 2015;10(2):113-121.

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Gardiner AM, Cuchna JW, Walker SE, Clines S, Welch-Bacon CE, Van Lunen B. Student perceptions of standardized patient use in athletic training education. *Athl Train Educ J*. 2019;14(1):64-72.

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Sims-Koenig KN, Walker SE, Winkelmann ZK, Bush JM, Eberman LE. Translation of standardized patient encounter performance and reflection to clinical practice. *Athl Train Educ J*. 2019;14(2):117-127.

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Walker SE, Weidner TG. The use of standardized patients in athletic training education. *Athl Train Educ J*. 2010;5(2):87-89.

Definitions

Simulation: A pedagogy using one or more typologies to promote, improve, or validate a participant's progression from novice to expert. (Benner, 1984; Decker, 2007)

Standardized patient: A person trained to consistently portray a patient or other individual in a scripted scenario for the purposes of instruction, practice, or evaluation. (Robinson-Smith, Bradley & Meakim, 2009).

Fidelity: Believability, or the degree to which a simulated experience approaches reality; as fidelity increases, realism increases. The level of fidelity is determined by the environment, the tools and resources used, and many factors associated with the participants. (Dieckmann et al 2007)

Low-fidelity: experiences such as case studies, role-playing, using partial task trainers or static mannequins to immerse students or professionals in a clinical situation or practice of a specific skill (NLN-SIRC, 2013)

Mid-level fidelity: experiences that are more technologically sophisticated such as computer-based self-directed learning systems simulations in which the participant relies on a two-dimensional focused experience to problem solve, perform a skill and make decisions or the use of mannequins more realistic than static low fidelity ones having breath sounds, heart sounds and/or pulse. (NLN-SIRC, 2013)

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High fidelity: Experiences using full scale computerized patient simulators, virtual reality or standardized patients that are extremely realistic and provide a high level of interactivity and realism for the learner. (NLN-SIRC, 2013)

Prebriefing: an information or orientation session held prior to the start of a simulation-based learning experience in which instructions or preparatory information is given to the participants. The purpose of the prebriefing or briefing is to set the stage for a scenario and assist participants in achieving scenario objectives. Suggested activities in a prebriefing or briefing include an orientation to the equipment, environment, mannequin, roles, time allotment, objectives and patient situation. (NLN-SIRC, 2013)

Debriefing: An activity that follows a simulation experience and is led by a facilitator. Participants' reflective thinking is encouraged, and feedback is provided regarding the participants' performance while various aspects of the completed simulation are discussed. Participants are encouraged to explore emotions and question, reflect, and provide feedback to one another. The purpose of debriefing is to move toward assimilation and accommodation to transfer the learning to future situations. (Johnson-Russell & Bailey, 2010; NLN-SIRC, 2013)

Steps to set up and technology resources

Technology resources:

- Laerdal
- Nasco
- Gaumard
- Avkin
- CAE Healthcare
- Kyoto Kagaku
- Limbs 'N' Things
- Surgi-real
- EHR Tutor - Software
- EHR Go - Software

Steps:

1. Conduct needs assessment- is simulation experience necessary.
2. Construct measurable objectives.
3. Structure simulation experiences based on purpose, theory and modality for the experience.
4. Design the scenario or case to provide the context for the simulation experience.
5. Use various types of fidelity to create the required perception of realism.
6. Focus on participant-centered approach that is driven by objectives, participant's knowledge or level of experience and expected outcomes.
7. Pre-brief prior to simulation experience.
8. Following simulation experience with debriefing and/or feedback session.
9. Evaluate your process.

(INACSL Standards Committee. INACSL standards of best practice: Simulationsm Simulation design. Clin Simul Nurs. 2016;12(5):S5-S12.)

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Key objectives	Measurable objectives for this simulation
Introduction: Information is provided to the participant prior to them entering the room/scene	
Identifying data	Name, age, gender, height, weight
Chief complaint	Why the patient is being seen
Physical considerations	Where is the patient, exam room, gym, etc. What are they wearing
Case: Information is provided to the simulation coordinator/standardized patient. This information details the case and what they will see and physiologically respond to as the participant ask questions, or through physical assessment of the simulation.	
Props	Any special items needed for the case
History of present illness	Detail on onset, duration, severity, location, associated symptoms
Previous medical history	Past medical history, surgeries, medications, allergies
Family history	Heritable illnesses, any unusual illness among relatives
Social history	Smoking, alcohol and other drug use, sexual activity
Review of systems	Questions regarding organ systems to discover dysfunction and disease
Physical exam	Vital signs and any important physical findings
Differential diagnosis	3-4
Treatment	Based on the condition, what the participant should be providing for treatment