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Standards of Best Practice: Simulation

INACSL Standards of Best Practice: Simulation[SM] Participant Evaluation

INACSL Standards Committee

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As the science of simulation continues to evolve, so does the need for additions and revisions to the INACSL Standards of Best Practice: Simulation[SM]. Therefore, the INACSL Standards of Best Practice: Simulation are living documents.

Standard

All simulation-based experiences require participant evaluation.

Background

Simulation-based experiences support evaluation of knowledge, skills, attitudes, and behaviors demonstrated in the cognitive (knowledge), affective (attitude), and psychomotor (skills)[1] domains of learning. Formative evaluation of the participants fosters personal and professional development, to assist the participant in progression toward achieving objectives or outcomes. Summative evaluation focuses on the measurement of outcomes or achievement of the objectives at a discrete moment in time, often at the end of a program of study.[2] High-stakes evaluation refers to an assessment that has major implications or consequences based on the result or the outcome (such as on merit pay, progression or grades). Authentic evaluation of the participants using simulation-based experiences includes the following elements: (a) determine the intent of the simulation-based experience, (b) design the simulation-based experience to include timing of the evaluation, the use of a valid and reliable assessment tool, and evaluator training required, and (c) complete the evaluation and interpret the results.[3]

Potential consequences of not following this standard may lead to inaccurate assessment, poor participant experiences, poor learning outcomes, failure to progress, inappropriate selection of tools, or assessment bias.

Criteria Necessary to Meet This Standard

1. Determine the method of participant evaluation before the simulation-based experience.
2. Simulation-based experiences may be selected for formative evaluation.
3. Simulation-based experiences may be selected for summative evaluation.

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4. Simulation-based experiences may be selected for high-stakes evaluation.

Criterion 1: Determine the method of participant evaluation prior to the simulation-based experience.

Required Elements

- Participant evaluation is:
  - Directed by the objectives/outcomes and/or the intent of the simulation.
  - Guided by the type: formative, summative, or high-stakes evaluation.

Criterion 2: Simulation-based experiences may be selected for formative evaluation.

Required Elements

- Formative evaluation is conducted to:
  - Monitor progress toward achieving outcomes.
  - Provide ongoing formative feedback.[4,5]
  - Support participant's clinical competencies.
  - Identify and close gaps in knowledge and skills.
  - Assess readiness for real-world experiences.
  - Facilitate teaching and learning.
- Requires formally trained facilitators (see INACSL Standard: Facilitation).
- Use small group ratio, ideally a minimum ratio of one facilitator per three to five students.[6,7]

Criterion 3: Simulation-based experiences may be selected for summative evaluation.

Required Elements

- Summative evaluation is conducted:
  - At a discrete point in time (i.e., at the end of a course or certain time period).
  - In a safe learning environment.
  - After orientation to the environment and equipment.
  - Appropriate level of fidelity necessary to achieve the participant outcomes.
  - Utilizing a standardized format and scoring methods (i.e., utilizing a standardized scenario that includes information on when to cue, scenario length of time, and other scenario details).
  - With a video recording of the evaluation to allow review by multiple trained evaluators.[6,8]
- Use a theoretically based method to determine passing or cut scores[9] where appropriate.
- Select a valid and reliable instrument.
- Provide rater training for observation-based evaluation.[4,5]
- Establish interrater reliability when more than one rater required.
- Inform participants in advance of the evaluation process.
- Provide summative feedback to participant about achievement of outcomes.

Criteria 4: Simulation-based experiences may be selected for high-stakes evaluation.

Required Elements

- High-stakes evaluation is conducted:
  - At the end of the learning process, but may occur at other times to assess gaps in knowledge or to identify significant safety issues.
  - Based on specific participant objectives.
  - After the consequences and outcomes have been explained to the participants.
  - With predetermined parameters for terminating the scenario for its completion.
  - After the simulated-based experience has been piloted tested.
  - By trained, nonbiased objective raters or evaluators.
  - By an objective rater or evaluator using a comprehensive tool (i.e., checklist or rubric that clearly outlines desirable and undesirable behaviors).
  - After the participant has had the opportunity for multiple exposures to simulation-based experiences including evaluations.[7,10]
- Use an evaluation tool previously tested with similar populations.
- Use more than one evaluator for each participant, either directly observed or a video recording.[8]

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The International Nursing Association for Clinical Simulation and Learning (INACSL) is the global leader in transforming practice to improve patient safety through excellence in healthcare simulation. INACSL is a community of practice for simulation where members can network with simulation leaders, educators, researchers, and industry partners. INACSL also provides the INACSL Standards of Best Practice: Simulation[SM], an evidence-based framework to guide simulation design, implementation, debriefing, evaluation and research.