Featured Article

Standards of Best Practice: Simulation
Standard VII: Participant Assessment and Evaluation

Carol R. Sando, PhD, RN, CNE\textsuperscript{a}, Rita M. Coggins, MSN, RN\textsuperscript{b}, Colleen Meakim, MSN, RN\textsuperscript{c}, Ashley E. Franklin, MSN, RN, CCRN, CNE\textsuperscript{d}, Donna Gloe, EdD, RN-BC\textsuperscript{e}, Teri Boese, MSN, RN\textsuperscript{f}, Sharon Decker, PhD, RN, ANEF, FAAN\textsuperscript{g}, Lori Lioce, DNP, FNP-BC, CHSE, FAANP\textsuperscript{h}, Jimmie C. Borum, MSN, RN, CNS\textsuperscript{i},*

\textsuperscript{a}Associate Professor, Delaware State University, College of Education, Health, and Public Policy, Department of Nursing, Dover, DE 19901, USA
\textsuperscript{b}Assistant Director, Concepts Integration Laboratories, East Carolina University College of Nursing, Greenville, NC 27858, USA
\textsuperscript{c}Director, Simulation and Learning Resources, Villanova University, College of Nursing, Villanova, PA 19085, USA
\textsuperscript{d}Instructor and Simulation Specialist, Oregon Health and Science University, School of Nursing, Portland, OR 97201, USA
\textsuperscript{e}Assistant Professor, Coordinator of Simulation Center, Missouri State University, Springfield, MO 65897, USA
\textsuperscript{f}Associate Professor, Clinical, Director Center for Simulation Innovation, University of Texas Health Science Center at San Antonio, School of Nursing, San Antonio, TX 78229, USA
\textsuperscript{g}Professor and Director of The F. Marie Hall SimLife Center, Texas Tech University Health Science Center, School of Nursing, Lubbock, TX 79430, USA
\textsuperscript{h}Clinical Assistant Professor and Simulation Coordinator, The University of Alabama in Huntsville, College of Nursing, Huntsville, AL 35802, USA
\textsuperscript{i}Assistant Professor of Professional Practice, Director, Health Professions Learning Center, Harris College of Nursing and Health Sciences, Texas Christian University, Fort Worth, TX 76129, USA

**KEYWORDS**

simulation; high-stakes evaluation; formative assessment; summative evaluation; standard; guideline

**Abstract:** In a simulation-based experience, formative assessment or summative evaluation can be used. Formative assessment fosters personal and professional development and helps participants progress toward achieving objectives. Summative evaluation focuses on measurement of outcomes or achievement of objectives. The use of simulation supports assessment or evaluation of behaviors demonstrated in the domains of learning: cognitive (knowledge), affective (attitude), and psychomotor (skills).

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* Corresponding author and Chair, INACSL Standards Committee: j.borum@tcu.edu (J. C. Borum).
Statement

In a simulation-based experience, formative assessment or summative evaluation can be used.

Rationale

Formative assessment fosters personal and professional development and helps participants progress toward achieving objectives. Summative evaluation focuses on measurement of outcomes or achievement of objectives. The use of simulation supports assessment or evaluation of behaviors demonstrated in the domains of learning: cognitive (knowledge), affective (attitude), and psychomotor (skills).

Outcome

The outcome of formative assessment is the improvement of participants’ performance. The outcome of summative evaluation or high-stakes evaluation may be an assigned grade, promotion, merit pay, certification, or demonstration of achievement of objectives or competency.

Criteria

To promote valid and reliable results, determine the type of participant assessment or evaluation prior to the simulation-based experience. Participant assessment or evaluation may include:

- Formative assessment.
- Summative evaluation.
- High-stakes evaluation.

Guidelines

Criterion 1: Formative Assessment

Guideline: Formative feedback provides information for the purpose of improving performance and behaviors associated with the three domains of learning: cognitive (knowledge), affective (attitude), and psychomotor (skills).

Guideline Statement: To help participants meet expected outcomes, formative assessment should be consistent, providing constructive feedback, such as coaching, cueing, prompting, or concept mapping.

Formative assessment in simulation should be:

- Based on developmental objectives that are designed to (1) meet participant outcomes, (2) provide feedback, and (3) remedy errors in thinking and practice.
- Accommodating for participants who need extra learning time.
- Appropriate for the level of experience of the participants.
- Specific to provide supplemental strategies for achieving participant outcomes.
- Completed in a manner consistent with those described in Standard VI.

Criterion 2: Summative Evaluation

Guideline: Summative evaluation focuses on measurement of outcomes or achievement of objectives.

Guideline Statement: Summative evaluation of the participant’s performance or competence occurs at the end of a predetermined time period. In some cases, the evaluation tool may be shared with participants in advance.

Summative evaluation in simulation should be:

- Previously tested for evidence-based content.
- Based on evaluation tools previously tested with like populations for validity and reliability; when there is more than one evaluator, establish interrater reliability.
- Standardized in format and in scoring methods.
- Accompanied by specific participants’ objectives.
- Appropriate in its level of fidelity to achieve participant outcomes.
- Explained before the start of the evaluation process.
- Held in an environment with equipment to which the participant has been oriented.
- Based on preestablished guidelines pertaining to participant errors.
- Conducted by trained objective observers or raters.
- Inclusive of:
  i. Guidelines for cueing.
  ii. Predetermined parameters for terminating the scenario before its completion.
  iii. Preestablished criteria allowing the evaluator to rate the participant(s).
  iv. Self-assessment by the participant, when this is a requirement of the simulation-based experience.

Criterion 3: High-Stakes Evaluation

Guideline: Because familiarity with participants is a significant source of observer bias, the influence of observers’ previous knowledge of participants should be avoided whenever possible.

Guideline Statement: Evaluation of participants’ performance by objective observers or raters increases objectivity and diminishes biased assessment. Moreover, interrater objectivity and reliability are enhanced by the use of standardized checklists that focus on assessment of specific skills. Detailed tools specifically identify appropriate as well as inappropriate behaviors and help to decrease subjectivity.
High-stakes evaluation with high-risk consequences should be:

- Explained to participants before the start of the evaluation process.
- Pilot tested.
- Standardized in format and in scoring methods.
- Based on evaluation tools previously tested with like populations for validity and reliability; when there is more than one evaluator, establish interrater reliability.
- Conducted at an appropriate level of fidelity to achieve participant outcomes.
- Based on specific participant objectives.
- Developed with preestablished guidelines for the type (if any) of consistent cueing of the participants.
- Designed with predetermined parameters for terminating the scenario before its completion.
- Designed to include the participant’s self-assessment of performance as part of the evaluation, when this is a requirement of the simulation-based experience.
- Conducted by trained objective observers or raters.

**Original INACSL Standard VII Reference**


**Supporting Materials**


