Learning Objectives

1. Identify the purpose of evaluating learners in simulation learning experiences.
2. Apply best practice standards when evaluating learners in simulation.
3. Explore evaluation tools for individuals and teams participating in simulation.

Purpose of Simulation Learning Experiences

- Determines the purpose of evaluation
  - Evaluation
    - Making a judgment about performance
  - Assessment
    - Giving feedback for the purpose of improvement
- Often used interchangeably in simulation
Purpose of Simulation Learning Experiences

- Purpose of evaluation
  - Learning
  - Application
  - Competency
  - Testing
  - Others

INACSL Standards of Best Practice: Simulation

- Outcomes and Objectives
- Simulation Design
- Facilitation
- Debriefing
- Participant Evaluation

INACSL Standards of Best Practice: Simulation: Professional Integrity

Criterion 3: Create and maintain a safe learning environment (See INACSL Standard: Facilitation).

- Required elements:
  - Clearly communicate the attributes of professional integrity and the importance of confidentiality.
  - Support active learning, reflection, and deliberate repetitive practice.
  - Provide clear communication and honest feedback in an effective, respectful manner.
  - Maintain professional boundaries to minimize fear of negative consequences to professional reputation and personal relationships (i.e., colleague to colleague, peer to peer, teacher to student, or friend to friend).
INACSL Standards of Best Practice: Simulation: Outcomes and Objectives

Criterion 2: Construct Specific, Measurable, Achievable, Realistic, Time-phased objectives based on expected outcomes.

Required elements:
- Specific objectives:
  - Identify participants, scenario, fidelity, facilitation, debriefing, assessment, and evaluation methods.
  - Criterion for "Specific" objectives to be measured.
- Measurable objectives:
  - Essential for formative, summative, and high-stakes evaluation (see INACSL Standard: Participant Evaluation).
  - Establish a baseline as a reference point to quantify change.
  - Determine evaluation criteria.
  - Assess the outcome via a method of measurement or an instrument that is reliable, valid, and feasible to obtain.

INACSL Standards of Best Practice: Simulation: Simulation Design

Criterion 9: Include an evaluation of the participant(s), facilitator(s), the simulation-based experience, the facility, and the support team.

Required Elements:
- Determine the evaluation processes in the design phase to ensure quality and effectiveness of simulation-based experiences.
- Adopt an evaluation framework to guide selection and/or development of a valid and reliable tool to measure expected outcomes.
- Ensure that participants are clear on the method of participant evaluation (formative, summative, and/or high-stakes) before or at the onset of the simulation.
- Include in the evaluation process input from participants, peers, and stakeholders.
- Use assessment data to assist in evaluating the simulation program for quality process improvement.
- Follow INACSL Standard: Participant Evaluation.

INACSL Standards of Best Practice: Simulation: Facilitation

Criterion 4: Facilitation methods during a simulation-based experience involve the delivery of cues (predetermined and/or unplanned) aimed to assist participants in achieving expected outcomes.

Required elements:
- Deliver cues (also referred to as prompts or triggers) to draw attention of the participants to critical or noncritical information related to the context of the scenario or case. Cues can be predetermined or unplanned.
- Predetermined cues are incorporated into the design of the simulation based on common and anticipated actions by participants (see INACSL Standard: Simulation Design).
- Unplanned cues (also referred to as life savers) are delivered in response to unanticipated participant actions.
INACSL Standards of Best Practice: Simulation: Debriefing

Criterion 5: The debrief is congruent with the objectives and outcomes of the simulation-based experience.

Required elements:
- Consider the objectives in the debriefing session.
- Consider the outcomes of the simulation experience and adjust debriefing to include learner-centered objectives.
- During the debriefing session, identify performance gaps based on the expected outcomes of the simulation-based experience.

INACSL Standards of Best Practice: Simulation: Participant Evaluation

Criteria

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

INACSL Standards of Best Practice: Simulation: Participant Evaluation

Criterion 1: Determine the method of participant evaluation before 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.
INACSL Standards of Best Practice: Simulation: Participant 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.
    - 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.

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.
    - At an appropriate level of fidelity necessary to achieve the participant outcomes.
    - Utilizing a theoretically based method to determine passing or cut scores where appropriate.
    - Select a validated reliable instrument.
    - Establish inter-rater reliability when more than one rater is required.
    - Inform participants in advance of the evaluation process.
    - Provide summative feedback to participant about achievement of outcomes.
Criterion 4: Simulation-based experiences may be selected for high-stakes evaluation.

- Required Benefits
  - High-stakes evaluation is conducted:
    - At a point 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.
    - After the simulated-based experience has been piloted tested.

- Evaluation Tools
  - Teams
  - Individuals
  - Published
  - Purchased
  - Create your own
Evaluation Tools

- Considerations
  - Content should have a theoretical foundation
  - Measures should be linked to specific learning objectives and leveled to learner.
  - Include all domains of learning
  - Capture multiple levels of performance
  - Focused on observable behaviors and the processes of performance, not just outcomes

Evaluation Tools

INACSL Repository of Instruments Used in Simulation Research

- https://www.inacsl.org/resources/repository-of-instruments/

Evaluation Tools

- Reliability and Validity of tools
  - Interrater reliability