

Using the Playbar

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The Art of Debriefing: Key Elements in CSD Simulation Education

Carol M. Szymanski, PhD, CCC-SLP, CHSE



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About the Presenter



Carol is a speech-language pathologist and a Certified Healthcare Simulation Educator. She develops computer-based simulations and supports CSD programs in integration of simulations. She has taught assessment coursework utilizing computer-based clinical simulations for many years. She provides tele-supervision and clinical teaching to students in clinical practica utilizing computer-based simulations.

Learning Objectives

- After this session, participants will be able to
 - List types of simulations that may be used in clinical education in communication sciences and disorders.
 - Discuss the importance of simulation debriefing as part of the learning process.
 - Describe a variety of simulation debriefing methodologies.

Clinical Education in Communication Sciences and Disorders

- Graduate programs in CSD face many challenges in providing high quality clinical training to students:
 - Expanding scopes of practice
 - Limited availability of off-campus clinical sites and preceptors
 - Expectations for interprofessional education
 - Increasingly complex healthcare and school systems
- One solution: alternative clinical education methods
- Use of clinical simulations is a viable educational tool that facilitates development of professional competencies in CSD students
- Dudding, C., Brown, D., Estis, J., Szymanski, C., & Zraik, R. (2018). Best practices in healthcare simulations in communication sciences and disorders, CAPCSD Task Force White Paper.

CFCC Certification Standards – 2016 Revision

- Revision 2: Implementation Language to Standard V-C (additions to paragraph 2) – Acceptance of clinical simulation for up to 20% (75 hours) of direct client hours:

Up to 20% (i.e., 75 hours of direct contact hours may be obtained through clinical simulation (CS) methods. Only the time spent in active engagement with the CS may be counted. CS may include use of standardized patients and simulation technologies (e.g., standardized patients, virtual patients, digitized mannequins, immersive reality, task trainers, computer-based interactive). Debriefing activities may not be included.

Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language Hearing Association. (2013). *2014 Standards for the Certificate of Clinical Competence in Speech-Language Pathology*. Retrieved [date] from <http://www.asha.org/Certification/2014-Speech-Language-Pathology-Certification-Standards/>.

What are clinical simulations?

- simulations are “a technique—not a technology—to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner” (Gaba, 2004, p. i2)
- can be used to train students in a specific skill or task, as an evaluation tool to assess clinical competencies, or as an experiential learning opportunity for students (Dudding, et al, 2018)

Simulations as training tools

- Representations of real healthcare events used to train healthcare professionals to perform clinical skills and work in teams
- Healthcare simulations can be used to train doctors, nurses, physical therapists, audiologists, occupational therapists, speech-language pathologists, respiratory therapists, and other allied health professionals.



Five categories of healthcare simulation, ranging in levels of fidelity:

- standardized patients
 - part-task trainers
 - mannequins
 - computer-based interactive (games)
 - immersive virtual reality
- Following are definitions and examples of each (adapted from Dudding & Nottingham, 2018)

Standardized Patients

Definition

- A person simulates an actual patient in a realistic, standardized and repeatable way.



Application

- Delivering bad news such as identified hearing loss in newborn
- Counseling patient regarding risks of aspiration

Task Trainers

Definition

- A device to train in a specific procedure or skill. Represents a part or region of a body. Can be used in combination with other types of simulations.

**Application**

- using otoscopy trainer to practice insertion and viewing landmarks in the ear
- employing head and neck trainer to practice speaking valve placement.

Mannequins

Definition

- A life-size human-like simulator. Vary in fidelity and cost. High-fidelity simulators include heart, lung, movement, hearing, and voice functioning. Controlled by computers and software.

**Application**

- using a mannequin programmed with oxygen saturation values to teach tracheostomy and speaking valve management
- programming a specialized manikin to estimate ABR (auditory brainstem response)

Computer-Based Interactive Simulations

Definition

- A simulation represented on a computer screen, often based on interactive gaming technologies.

Application

- implementing virtual case studies to teach diagnostic skills
- allowing to practice hearing assessments on a virtual audiometer.



Immersive Virtual Reality

Definition

- A computer-based three-dimensional representation that has the feeling of immersion.

Application

- Role playing with use of avatars in an interprofessional environment



Simulation Learning Theory

- Quality simulation learning experiences (SLEs) are more than technology and flash – they are grounded in learning theory and educational philosophy.
- Kneebone (2005) indicates that quality SLEs must include:
 - Deliberate practice in a safe environment
 - Expert instructors available to the learners
 - Simulation experiences that mimic real life
 - Experiences that are learner centered

Deliberate Practice

Opportunities for
repeated
performance

- Learners actively practice skill or task
- Improve current level of proficiency

Feedback

- Immediate or delayed, specific, and informative feedback

Problem Solving and
Evaluation

- Group interactions to solve clinical problems
- Individual performance feedback based on learning objectives

Role of Instructors

Establish trust:
protect learners'
rights and
confidentiality

Foster experiential
learning

Support critical
thinking and
metacognition

Understand diversity
in learning styles

Account for
differences in
training and
experience

Fidelity and Realism

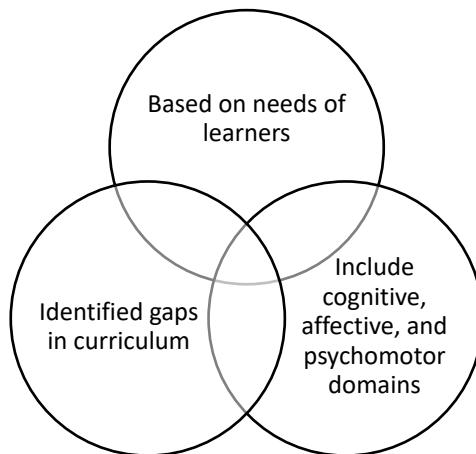
Must Mimic Real Life

Allow learner to immerse and
suspend disbelief

Physical, equipment and
environmental fidelity

Psychological fidelity

Learner Centric



Constructivism

- Simulation learning experiences are constructivist in nature: social practice in which participants interact with one another in a goal-oriented fashion (Diekmann, Gaba & Rall, 2007)
- Learners construct new knowledge based on their experiences and active engagement in the learning process
- John Dewey – experiential learning must be mediated with reflection.

Framework for Designing, Implementing, and Evaluating Simulation

- Based on Jeffries (2005)
- True to the earlier work of Kneebone and others – educational simulations needs to be student-centered, with the responsibility of learning with the student
- Include opportunities for active learning and collaboration

Design of the simulation



- The scenario design is critical
- Based on pre-established learning objectives
- Should involve opportunities for clinical decision-making, and acquisition of knowledge and skills
- Should consider level of learner participation, fidelity, physical set up

Evaluation of the simulation



- Evaluation of student performance
 - Based on pre-set learning outcomes
 - Formative or summative
- Evaluation of the simulation experience
 - Critical evaluation and continuous improvement
 - *Simulation Effectiveness Tool*
(Leighton, Ravert, Mudra & Macintosh, 2015)

Implementation of the simulation



- Simulated learning experiences consist of three phases:
 - Pre-briefing
 - Simulation scenario
 - Debriefing

Pre-briefing

- Orientation/introduction to the SLE
 - Learners receive information about equipment, the scenario, the roles.
 - Discuss expectations of performance, learning objectives, and evaluation measures
 - Answer any questions, address concerns and anxieties
 - The learners then participate in the scenario
- Dieckmann, Gaba & Rall, 2007; Gaba, 2004; Jeffries, 2005

Example of pre-briefing

- Video

Pre-briefing

- Example of pre-briefing in a tele-supervision session

 SIMUCASE

 Assessment Form

CLIENT NAME
Sarah Hampton

CLIENT DOB/AGE
26 Years Old

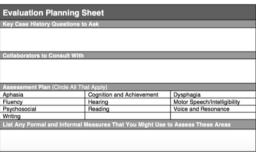
REFERRED BY
Lucile Grand, M.D.

REASONS FOR REFERRAL
Sarah is a 26-year-old female patient who was referred for voice evaluation and therapy by her primary care physician. You are a speech-language pathologist at an outpatient clinic assigned to complete the evaluation.

COMMENTS
She hopes to raise the pitch of her voice.

 Colt- Assessment

Colt was recently diagnosed with vocal nodules and his ENT recommended speech therapy. Colt's average clinical clock hour time for mastery level competency is 60 minutes.



Evaluation Planning Sheet
Key Case History Questions to Ask
Collaborators to Consult With
Assessment Plan (Circle All That Apply)
Aphasia Cognition and Achievement Dysphagia
Dysarthria Expressive Language Speech-Immobility
Psychological Hearing Voice and Resonance
Other
List Any Formal and Informal Measures That You Might Use to Assess These Areas

Debriefing

- Often cited as the most critical learning experience of the simulation process.
- Frequently occurs immediately following the simulation experience, but may also occur on a delayed basis.
- Led by an experienced facilitator who has observed or participated in the SLE.
- Participants receive feedback and are encouraged to engage in reflective thinking.
- Key to learner assimilation of knowledge and skill, and transfer of learning to future situations.
- Jeffries, et al, (2015)

Debriefing

- Originated in the military, where it was used to understand strategic planning for operations, as well as reduce the psychological impact of potentially traumatic events
- Debriefing sessions were therapeutic; verbally explaining the event in a group helped the participants understand and process what happened from different perspectives (Fanning & Gaba, 2007)
- Debriefing occurs in a safe environment where students can:
 - Reflect
 - connect back to the learning objectives
 - apply learning to the development of clinical decision-making
- Wilson, L. & Wittmann-Price, R.A. (Eds.), (2015). *Review Manual for the Certified Healthcare Simulation Educator*. Spring Publishing Company, LLC. New York.

The Debriefing Process

- Mediated by a knowledgeable and skilled simulation facilitator to support student learning
- Occurs retrospectively and includes all of the learners actively involved in the experience
- Watching a video of the simulation may assist learners in analyzing their performance and provide some structure for the debriefing process
- If necessary, *in-simulation debriefing* may be utilized – where debriefing is done by suspending the scenario to discuss a specific incident or aspect of the situation.
- Wilson, L. & Wittmann-Price, R.A. (Eds.), (2015). *Review Manual for the Certified Healthcare Simulation Educator*. Spring Publishing Company, LLC. New York.

Five objectives of debriefing

- Warrick, Hunsaker, Cook, & Altman (1979)



1. Identification of different perceptions and attitudes
2. Linking the simulation to specific theory, content, or skill techniques
3. Development of a shared narrative for future thought and discussion
4. Opportunity for feedback on involvement, behavior, decision-making
5. Reestablishment of the classroom climate to pre-simulation purposes

Summary of Essential Elements of the Debrief

1. Debriefor or simulation educator
2. Participants or learners to debrief
3. A simulation experience
4. The impact of the simulation experience
5. Recollection of the simulation experience
6. Report about the simulation experience
7. Time required for debriefing

(Lederman, 1984)

Summary of the Learning Process in Debriefing

- Provides opportunity to practice and acquired knowledge and clinical skill in a safe environment
- Much of the knowledge acquisition is facilitated during the debriefing process because it is a constructivist teaching strategy
- A learning process that ties in all three domains of learning:
 - Psychomotor (skill performance analysis)
 - Affective (feelings and emotions discussed)
 - Cognitive (event deconstruction facilitates learning)
- Wilson, L. & Wittmann-Price, R.A. (Eds.), (2015). *Review Manual for the Certified Healthcare Simulation Educator*. Spring Publishing Company, LLC. New York.

Example of debriefing

- Video

Example of Debriefing

- During tele-supervision of virtual practicum utilizing computer-based simulations
- First time completing a full assessment case
- Questions and concerns were mostly about concrete, factual pieces of information, or about the “rules” of the game

Reflection

- Debriefing is comprised of the perceptions if those involved, and no one has the “correct” view
- Different viewpoints assist learners in understanding different elements of the scenario, which mimics interprofessional clinical experiences
- Debriefing discussions should begin with open-ended questions asking participants to explain the situation via their viewpoint



Reflection

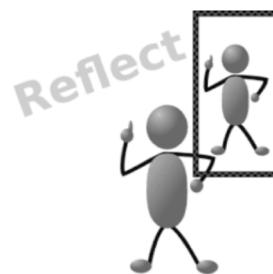
- Fanning & Gaba (2007) call reflection “the cornerstone” of both experiential learning and lifelong learning.
- Reflection can be facilitated in different ways:
 - Free-flow discussion
 - Posing reflective questions (“What was the one thing that affected you most?”)
 - More specific follow-up questions (“What would you do differently if you were in that situation again?”)

Other techniques Utilized for Debriefing

- Adapted from Fanning & Gaba (2007)
 - Funneling
 - Framing
 - Frontloading
 - Plus-delta
 - Good cop-bad cop
 - Advocacy-inquiry
 - Case review

Reflection

- Three stages of reflection:
 - Awareness
 - Critical analysis
 - New perspective
- Final stages of reflection are gained after a learner engages in *critical appraisal, peer group discussions, and self-evaluation.*
- Reflection facilitates deeper meanings and critical thinking about experiences



Example of Debriefing

- Video

Example of Debriefing

- Video

Other Requirements for Successful Debrief

- Learners being “open” and receptive to accepting the information presented during debriefing
- This can be accomplished through a non-threatening presentation that maintains learner-facilitator respect at all times, as well as confidentiality.
- Integration of the knowledge gained from the simulation to knowledge already familiar to the learners
- Facilitating the transfer of knowledge from the simulation to actual clinical practice.

Example of Debriefing

- Video

Role of Socratic Questioning

- Socratic dialogue – oral questioning – can promote critical thinking and reflection
- Pose questions that require synthesis of concepts rather than yes/no or recall of facts
- Promote thinking by asking “what if” questions and changing the situation to encourage learners to think beyond the situation
 - (Dreifuerst, 2009)

Benefits of Socratic Questioning

- Increases motivation and participation
- Helps facilitator monitor learners' acquisition of knowledge and understanding
- Promotes higher levels of cognition
- Assesses learners' progress
- Facilitates environmental management
- Encourages learners to ask and answer questions
- Promotes dialogue/interaction/debate among educators and learners
- (Ralph, 2000)

Role of the Facilitator in the Debriefing

- Fanning & Gaba (2007) describe facilitator involvement in debriefing from "high" to "low"
- HIGH Level Facilitation: facilitator outlines the process, guides the discussion as necessary, has low-level of involvement, but learners highly involved
- LOW Level Facilitation: facilitation takes on an involved role, learners less involved and show less initiative, facilitator uses a direct debriefing process, simulation educator may over-instruct

The Debriefing Environment

- Comfortable private space, enough time
- Large groups of learners may pose a challenge
 - Separate groups: put the large group into smaller groups. Either have more than one de-briefer or more than one session with the same debrief facilitator
 - Fishbowl method: Have an inner circle and outer circle. Debrief one at a time; all remain and hear both debriefs, however participate only in one

Debriefing Difficulties

- Learners may interpret the debriefings differently than was intended from the facilitator's established goals
- Learners may participate on a limited basis
- Learners may not be ready to engage in insightful self-reflection
- In these cases, facilitators may have to spend extra time, utilize the video of the simulation, or even re-enact the simulation to demonstrate an alternate outcome.

Types of Debriefing Methods

Structured Debriefing

- Begin with establishing group rules so that the learners focus on the meaning of the simulation scenario rather than the fidelity.
- This provides guidance in the learning process, facilitates the collection of data, and provides insight into the learners' thoughts.

Case Study Analysis Debriefing

- One common method of debriefing is review of a case study.
- Meet in person, have learners work as a team in a supportive environment.
- Provide both process (teamwork) feedback and outcome feedback (the answer), as well as individual and team feedback.

Types of Debriefing Methods

Written Debriefing

- Follows John Dewey's theory and has the learners take experiential activities and reflect on them through writing.
- Occurs after the oral debriefing and allows for some private time to examine behaviors, emotions, feelings, and statements made by themselves and others.
- Forces learners to organize the simulation experience on a personal basis; it is private communication.
- Journal writing, worksheet completion/question answering, letters about what they learned,
- Con: the time and energy for the learners to submit, as well as the facilitator to read and respond to the written work

Self Debriefing

- Use of videos
- Self-rating and peer-rating
- participants were able to critique their performance, but there is variability in the accuracy levels of the ratings
- Con: Some degree of expert direction is at times required

Summary

- More and more training programs in CSD are utilizing clinical simulations to meet the demands of both academic and clinical teaching.
- No matter the type of simulation, the implementation is the same: pre-brief, simulation with feedback, debrief.
- The debrief is the most important piece of the learning experience – where experience, reflection, and application meet.
- As facilitators, we need to make the debrief an art form, and create reflective, self-evaluative learners that can apply the knowledge and skill learned from the simulation to new situations.
- We can (and already are!) successfully utilizing simulated learning experiences in speech-language pathology and audiology – you can too!

Questions?



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