

Simulation Experiences to Enhance the Technical and Non-Technical Skills of Aspiring Nurse Anesthesia Residents

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Background

- Through simulation-based learning experiences (SBLE), participants can develop technical and non-technical skills, think critically, collaborate with interdisciplinary teams, and practice clinical decision-making (Carey & Rossler, 2022).
- Krishnan et al. (2017) found that poorly designed simulators, inadequately trained facilitators, and unspecified learning objectives negatively impacted student learning.
- Organizations like the International Nursing Association for Clinical Simulation and Learning (INACSL) and the Society for Simulation in Healthcare (SSH) provide guidance on best practices for SBLE.
- Critical Care Anesthesia Nursing Exploration (CCANE) provides intensive care registered nurse participants with didactic education and hands-on simulation experience to enhance their knowledge and critical thinking skills. Faculty and staff had received negative feedback regarding the high-fidelity simulation experience.

Purpose

- This project sought to survey participant experiences for the CCANE high-fidelity simulation based on best practice standards and clarify dissatisfaction with the current practices. Once identified, recommendations were made to improve the current simulation experience.

Objectives

- Survey previous CCANE participants using a proprietary Likert-like survey based on best practices laid out by leading organizations in the field, such as the International Nursing Association for Clinical Simulation and Learning (INACSL) and the Society for Simulation in Healthcare (SSH).
- Identify which domains in the current simulation display opportunities for improvement.
- Provide recommendations to faculty for improving simulations and prioritizing the weakest domain areas. These recommendations will be based on current best practices and grounded in theory.
- Make recommendations for evaluation of simulation post-improvement implementation.



PICO: In CCANE participants, does aligning the simulation structure with best practices improve the experience?

Methodology

- Send an email to previous simulation participants to introduce themselves to the group
- Disseminate the survey to individuals who have consented
- Review current literature based on survey results.

Sample Section From Survey

Prebriefing		strongly disagree	disagree	somewhat disagree	neither agree or disagree	somewhat agree	agree	strongly agree
5)	Did you receive adequate didactic education to prepare you for the simulation experience?	☐	☐	☐	☐	☐	☐	☐
6)	Did you receive adequate instruction to prepare you for the simulation experience?	☐	☐	☐	☐	☐	☐	☐
7)	Did you understand the purpose of the simulation experience?	☐	☐	☐	☐	☐	☐	☐
8)	Did you understand your role in the simulation experience?	☐	☐	☐	☐	☐	☐	☐

Results

Prebriefing Identified as a Domain Needing Improvement, n = 11			
Item	Likert-scale		
	Disagree	Neutral	Agree
	f (%)	f (%)	f (%)
Was the purpose of the simulation experience understood	1(9)	1(9)	9(81)
Was your role in the simulation experience understood	1(9)	2(18)	8(72)
Was there adequate instruction to prepare for the simulation	1(9)	1(9)	9(81)
Was there adequate didactic education to prepare for the simulation experience	1(9)	1(9)	9(81)

“The only aspect of the simulation I found inadequate was the high-fidelity critical illness experience. It was difficult to understand what we were meant to do or what we were supposed to pretend to do or use. This made it a confusing situation.”

2 Phases of Recommendations

- Phase 1: Development of a facilitators prebriefing tool and a participants FAQ document.
- Phase 2: Meet with facilitators to educate them on how to use the prebriefing tool, survey them to ensure understanding, roll out new tools at next CCANE event, and survey participants following high-fidelity simulation to assess satisfaction with structured prebrief.

Sample of a Section of Prebrief Facilitator Tool

Prebrief Facilitator Tool
Hello, my name is _____. And I will be your facilitator for today's simulation. We are excited to have you here. We have created the simulation to be as life-like as possible but recognize this is not a real situation. We ask that you treat the simulation as if it were real life to create the best learning experience possible. Simulation provides us with the opportunity to learn in a safe place. We want you to feel safe thinking out loud, taking risks with your decision making, and stepping outside your typical role as a bedside registered nurse. This experience is to promote learning and will not impact any future admissions decisions.
“We believe that everyone participating in this simulation activity is intelligent, capable, cares about doing their best and wants to improve.”

Sample of Participant FAQs

What is the purpose of the simulation events at CCANE? Healthcare simulation allows for a safe, inclusive learning experience that utilizes artificial environments, scenarios, and equipment to replicate real-world events. Simulation can teach procedural skills, enhance critical thinking, improve communication, and develop confidence without concern for patient harm. We offer a variety of simulation experiences at CCANE, such as airway management, ultrasound intravenous access, and a high-fidelity scenario. These are meant to mimic training modalities utilized in nurse anesthesia education.
What is my role in the high-fidelity simulation? Am I supposed to be a bedside RN, a CRNA, or something else? We want to enhance your critical thinking and teamwork for the high-fidelity simulation. While you may choose to assign group roles, we want you to step outside of the typical bedside nurse role. If you think an intervention is needed, please verbalize and initiate it. Notifying a physician or asking for a physician's order is unnecessary. We do not expect you to act as any specific provider.

Conclusion

- Previous CCANE participants provided constructive feedback regarding their experience with simulation activities.
- This project aims to improve participant experience in the critical care simulation by introducing a structured pre-brief.
- The structured pre-brief includes facilitator education on pre-briefing components and best practices as outlined by the INACSL Standards Committee (McDermott et al., 2021), the use of a standardized pre-briefing tool, and a participant FAQ given to participants before beginning the simulation.
- This project seeks to align with INACSL simulation best practices and create a psychologically safe learning environment, increase preparation and engagement of participants, and allow for more effective debriefing (McDermott et al., 2021).