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25TH ANNIVERSARY

LOOKING BACK REACHING FORWARD

SSH presents: Articles of Influence
July 2023 – June 2024

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WELCOME



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DISCLOSURES

Michelle A Kelly

- Associate Editor, Advances in Simulation
- Assistant Editor, Clinical Simulation in Nursing



Gabriel Reedy

• Editor in Chief, Advances in Simulation





Serkan Toy

Associate Editor, Advances in Simulation



Cathy Smith

Associate Editor, Journal of Healthcare Simulation



Learning Objectives

- Identify the range of journals where simulation-focused research and scholarship are regularly published.
- Discuss how a different research approach, identified from one of the articles, might inform your future work.
- Identify how the broad range of articles presented in this session might impact on your own practice.

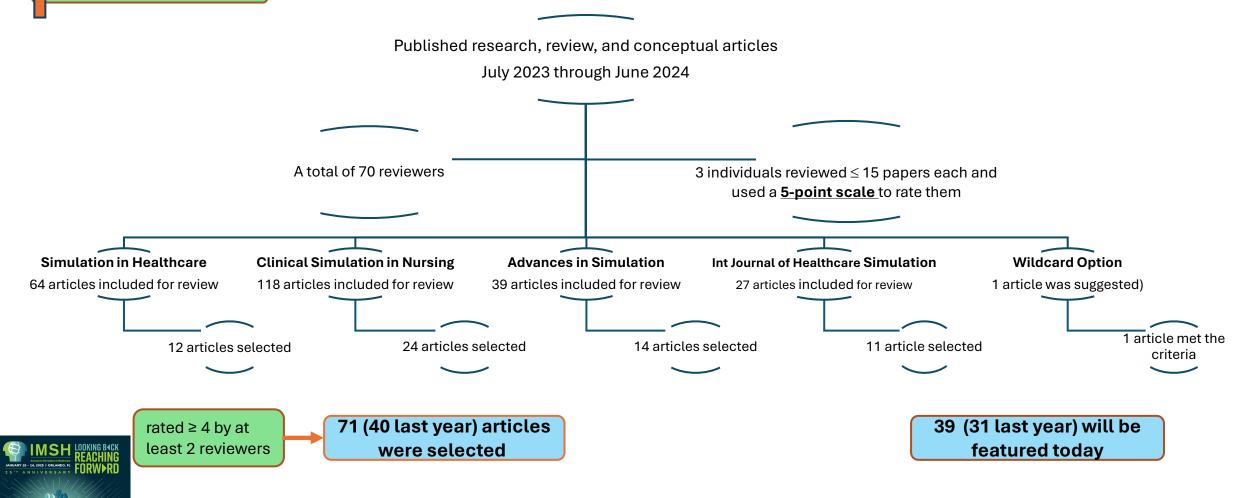
Building a Research Culture in Simulation

- Developing and celebrating excellent research in simulation
- Highlighting significant work in the field
- Exploring the articles you may have missed
- Common in other learned society meetings
- A complex task, even in a narrow range
- Influencing simulation practice and research (rather than ranking)
- Refining the process and methodology that is repeatable and builds year-on-year

248 articles sent for review

Process

up from 215 last year





Featured articles

Simulation in Healthcare (12)

Clinical Simulation in Nursing (13)

Advances in Simulation (7)

International Journal of Healthcare Simulation (6)



Wildcards (1)

Simulation in Healthcare (1 of 12)

Bajwa M, Ahmed R, Lababidi H, Morris M, Morton A, Mosher C, et al. Development of distance simulation educator guidelines in healthcare: a Delphi method application. Simulation in Healthcare. 2024;19(1):1-10. doi:10.1097/SIH.0000000000000707

Background and Methods

- Shift to distance simulation during COVID-19 necessitated new competencies.
- Iterative modified Delphi involving global experts.
- All experts participated in an annual simulation conference to discuss.
- Competencies categorized as "Basic" or "Advanced."
- Consensus via "Keep, Modify, Delete" options; kappa of 0.60 set as threshold.

Reviewer comments

Distance simulation is complex and logistically challenging and simulation educators can benefit from this study ...

Findings

- Competencies reduced from 66 to 59.
- Basic subcompetencies: 216 → 196.
- Advanced subcompetencies: 179 → 182.
- First consensus guidelines for distance simulation educators.
- Paves the way for future research in this modality.

This article makes a significant contribution to the field of healthcare simulation by providing the first set of consensus-based guidelines for distance simulation educators...rigorous methodology and practical focus make these guidelines a valuable resource for faculty development and future research



Simulation in Healthcare (2 of 12)

Birido N, Brown KM, Ferrer DO, Friedland R, Bailey SK, Wawersik D, et al. Health Care Simulation in Person and at a Distance: A Systematic Review. Simulation in Healthcare. 2024;19(1S):S65-S74. doi:10.1097/sih.0000000000000763

Background and Methods

- Explored mixed-distance simulation (combining in-person and distance elements).
- Systematic review: 10,929 articles screened;
 34 included.
- Analyzed configurations, terminology, and future directions for this hybrid approach.

Findings

Positives: Flexibility, accessibility, and broader participation. **Challenges:** Technical issues, learner engagement, and variability in delivery methods.

Key Insights:

- Facilitators in one location, and learners distributed.
- Terminology inconsistencies hinder standardization.

Future Directions:

- Faculty development to optimize mixed-distance formats.
- Rigorous methodologies/reporting for improved reproducibility.

Reviewer comments

Excellent article - provides a comprehensive review of key elements of mixed-distance simulation. The discussion of challenges, limitations, and potential future directions is both insightful and thought-provoking.

This study emphasizes the persistent need for advanced research in healthcare simulation. However, definitive conclusions regarding mixed distance simulation were hindered by methodological issues, such as adherence to guidelines, the application of theoretical frameworks, and the requirement for more rigorous experimentation.



Simulation in Healthcare (3 of 12)

Diaz-Navarro C, Armstrong R, Charnetski M, Freeman K, Koh S, Reedy G, Smitten J, Ingrassia L P, Matos M F, Issenberg B.

Background and Methods

- Sims reduces education inequities and improves outcomes.
- Iterative consultation with 50 societies across
 67 countries on six continents.
- Intended for policymakers, healthcare leaders, educators, and simulation practitioners.
- Goal: Establish consensus on simulation priorities for global adoption.

Findings

Benefits: Safety, team performance, resilience, and outcomes. **Challenges:** Inequitable access, need for evidence-based practices, integration barriers.

Key Recommendations:

- Promote low-cost, high-impact sims.
- Institutional and governmental support is crucial
- Use quality standards: faculty development, accreditation, and evaluation.
- Emphasize equity, diversity, and inclusion in sim practices.

Call for Action

For Leaders: Commit to simulation integration, funding, and policy support. **For Practitioners:** Champion sim as a learning tool, adhere to best practices, and advocate for patient safety.

For Systems: Embed simulation in curricula and system improvement.



This global consensus statement is the first of its kind. It has been helpful to have a document supported by so many organizations with recommendations for policy and leadership. The simulation community still has a long way to go but this was a vital first step.



Informs and Advocates for the Role of healthcare simulation and the future of healthcare simulation

Simulation in Healthcare (4 of 12)

Duff JP, Morse KJ, Seelandt J, Gross IT, Lydston M, Sargeant J, et al. Debriefing methods for simulation in healthcare: a systematic review. Simulation in Healthcare. 2024;19(1S):S112-S21. doi:10.1097/SIH.00000000000000000

Background and Methods

- Debriefing is vital to sim, evidence lacking.
- Systematic review guided by PICO framework:
- **P**: Healthcare providers.
- I: One debriefing or feedback intervention.
- **C**: Another debriefing/feedback intervention.
- O: Educational and clinical outcomes.
- Reviewed 70 studies on debriefing strategies, frameworks, and techniques.

Findings

- · Lack of robust empirical support.
- Identified significant gaps in the literature:
- Standardization of debriefing frameworks.
- Evidence linking debriefing methods to clinical outcomes.
- Future Directions:
- Validity test debriefing frameworks.
- Explore the link between debriefing methods and outcomes.
- Develop evidence-based guidelines for debriefing.



Although this article concludes on an inconclusive note, the points raised are valid and important in influencing the future direction of debriefing practice and research ... it reviews all the recent articles related to debriefing, which I use to inform my research and current practice.





Simulation in Healthcare (5 of 12)

Gardner AK, Rodgers DL, Steinert Y, Davis R, Condron C, Peterson DT, et al. Mapping the Terrain of Faculty Development for Simulation: A Scoping Review. Simulation in Healthcare. 2024;19(1S):S75-S89. doi:10.1097/SIH.0000000000000758

Background and Methods

- Faculty development is critical for improving simulation education.
- Scoping review screened 3,259 abstracts; 35 studies included.
- Aim: Explore the current landscape and provide recommendations for future.

Findings

- Wide variation in:
- Foundations and conceptual frameworks.
- Interventions and approaches for faculty development.
- Recommendations
- Develop cohesive faculty development models.
- Focus on evidence-based strategies to enhance continuity.
- Encourage collaboration to refine and share best practices.



This study emphasizes the significance of faculty proficiency in simulation-based education and points out the inconsistencies in faculty development within healthcare simulation, offering suggestions for enhanced cohesion.

Review of the topic is thorough and well-structured. I particularly liked the recommendations presented in tabular format, which I found to be highly useful for faculty development in SBE.



Simulation in Healthcare (6 of 12)

Green EP, Dong Y, Shah ND. Innovative research methods: using simulation to evaluate health care policy. Simulation in Healthcare. 2024;19(3):176-8. doi:10.1097/SIH.000000000000751

Background and Methods

- Healthcare policies aim to improve patient outcomes, access, and equity but may have unintended consequences.
- Testing new policies in the field risks patient harm and inequity.
- Simulation offers a safe environment to evaluate the impact of policies.

Findings

- · Simulations can:
- Identify potential barriers to clinician performance.
- Uncover unintended consequences.
- Takeaway
- Incorporating simulation into policy evaluation can lead to more effective, equitable, patient-centered healthcare policies.



Novel concept, test out health care policy in simulations, could avoid policy changes that actually worsen outcomes, they gave kidney transplant and hospital readmission examples.

This is a well-written article that presents a novel use of simulation in the policy space. Using simulation in policy planning and development is a great idea but also provides exposure to simulation within different groups of users that might not normally use simulation.





Simulation in Healthcare (7 of 12)

Background and Methods

- Focus: Impact of physical realism in simulation training on outcomes in low- and middleincome countries (LMICs).
- PRISMA-compliant systematic review (2011– 2023).
- 11 studies included: 9 randomized (n = 627) and 2 case-controlled (n = 159).
- Outcomes assessed: Clinical, educational, and procedural.

Findings

- Limited Evidence:
- Slight benefits in participant satisfaction and confidence.
- No difference in skills acquisition or clinical performance.
- Challenges:
- High risk of bias and inconsistency across studies.
- Certainty of Evidence: Very low.
- Recommendations
- Favor lower physical realism simulations due to costeffectiveness and similar outcomes in LMICs.
- Standardized outcome measures.
- More high-quality research in low-income settings.



The article is influential as I have an interest in low-middle income countries... This article will direct my future research practice.

This article presents a well-conducted systematic review that should serve as useful guidance in widening the application of simulation-based healthcare education in LMICs.



Simulation in Healthcare (8 of 12)

Lee JY, Donkers J, Jarodzka H, Sellenraad G, Faber TJ, van Merriënboer JJ. The Effects of reflective pauses on performance in simulation training. Simulation in Healthcare. 2024;19(2):82-9. doi:10.1097/SIH.0000000000000729

Background and Methods

- Reflective Pause: A key practice in simulationbased learning.
- Learners require cognitive and metacognitive aids for reflection.
- 72 med students in EM sim.
- Two conditions: Guided reflective pauses (n = 36);
 Control condition (n = 36): No guided reflection.
- Assessed: cognitive load, primary performance (dx & intervention), secondary performance (vigil ance), and encapsulation (handover report).

Findings

- Positive Effects of Reflective Pauses:
- Cognitive load: Decreased with guided reflection.
- Secondary performance: Improved.
- No Significant Effects on primary performance and encapsulation.
- Conclusion: Reflective pauses guided by cognitive and metacognitive aids can enhance specific performance aspects.
- Recommendations:
- Provide feedback during reflection.
- Incorporate an adaptation period to maximize benefits.

Reviewer comments



I found the topic of reflective pauses particularly interesting and believe it warrants further exploration.

This study opens new possibilities for research on in-action reflection in simulation-based learning. Based on the assumption that novice learners should be guided for an effective reflection, we have demonstrated an example of how to design CMAs.

Simulation in Healthcare (9 of 12)

Background and Methods

- 'Confederate is commonly used in sim research
- However, the term also carries historical/cultural connotations tied to the Confederate States of America, racial injustice, and slavery.
- Concerns raised: Potential adverse effects on the psychological safety of learners.
- Rapid Review (2000–2021)

Findings

- 765 articles identified using the term "confederate.
- 2,635 instances of the term were documented.
- Proposed Solution: Replace "confederate" with:
 - Embedded participant.
 - Simulated actor.
 - Scenario collaborator.
- Advocate for language changes in literature and practice to enhance inclusivity and safety.





In a time where psychological safety is a key topic in simulation and the workplace, it is time to change terminology.

This article makes a valuable contribution to the healthcare simulation literature by raising awareness of the potential harm associated with using the term "confederate" and advocating for more inclusive language

Simulation in Healthcare (10 of 12)

Rochlen LR, Putnam EM, Tait AR, Du H, Popov V. Sequential behavioral analysis: a novel approach to help understand clinical decision-making patterns in extended reality simulated scenarios. Simulation in Healthcare. 2023;18(5):321-5. doi:10.1097/SIH.0000000000000686

Background and Methods

- Extended Reality (XR) enhances sim training by providing:
- Dynamic behavioral data collection.
- High immersion and realism.
- Sequential Analysis identifies hidden decision-making patterns.
- Explored the use of sequential analysis to:
- Examine clinical decision-making behaviors in XR sims.

Findings

- Sequential analysis reveals previously unobserved decision-making sequences.
- Enables a better understanding of how healthcare professionals make clinical decisions.
- Future Directions: Potential for refining XR training scenarios and tailoring learning experiences to individual needs.



There is some technical complexity that will be difficult for some readers to fully buy into due to the need for expertise and resources, but this is a very innovative approach.

The summary statement doesn't do justice to the information and application of sequential behavioral analysis to analyze clinical decision-making in an XR-simulated setting presented in this article. There is a lot to unpack, and well worth the read. This approach needs further study and has the potential to positively impact the quality and consistency of clinical decision-making in real clinical situations.



Simulation in Healthcare (11 of 12)

Rodgers DL, Needler M, Robinson A, Barnes R, Brosche T, Hernandez J, et al. Artificial intelligence and the simulationists. Simulation in Healthcare. 2023;18(6):395-9. doi:10.1097/SIH.00000000000747

Background and Methods

- ChatGPT: potential applications in sims.
- · Can streamline simulation-based education.
- Can offer insights into scenario development
- · Challenges: Accuracy, relevance, and structure
- Examined two AI-generated simulation case examples to assess:
- Strengths of AI in scenario creation.
- Weaknesses and limitations of the generated cases.

Reviewer comments

Findings

- Strengths:
- Rapid case generation.
- Identification of novel angles for case scenarios.
- Weaknesses:
- Errors in clinical accuracy.
- Irrelevant or overly generic content.
- Lack of nuanced structure.
- Guidance:
- Use ChatGPT as a supplementary resource, not a standalone tool.
- Pair AI outputs with expert review to ensure quality and relevance.

This article contributes to the growing body of literature exploring the use of AI in healthcare simulation...offers valuable insights into the capabilities and challenges of using LLMs like ChatGPT for scenario creation...



As AI, such as Chat GPT, evolves, it is important for everyone in simulation to have an introduction to what AI can do for us and where its limitations are.

Simulation in Healthcare (12 of 12)

Stefanidis D, Cook D, Kalantar-Motamedi S-M, Muret-Wagstaff S, Calhoun AW, Lauridsen KG, et al. Society for simulation in healthcare guidelines for simulation training. Simulation in Healthcare. 2024;19(1S):S4-S22. doi:10.1097/SIH.000000000000776

Background and Methods

- Simulation is widely used but lack of guidelines for optimal training.
- **Objective:** Develop evidence-based guidelines to inform effective simulation practices.
- Systematic reviews addressing 16 key questions in simulation training.
- Recommendations developed using the GRADE methodology and expert panel consensus.

Findings

- 20 Evidence-Based Recommendations:
- 4 Expert Recommendations: Complementing evidence-based findings.
- Guidelines aim to help instructors and learners optimize simulation for healthcare training.
- First comprehensive, evidence-based guidelines
- A foundation for standardized, effective use of sims.





These guidelines should form the backbone of simulation principles and practice, given the amount of work and thought that has gone into the formulation.



Clinical Simulation in Nursing (1 of 13)

Verkuyl, M., Gore, T. & Bowler, F. (2024). Learn More About INACSL's Endorsement Program! https://doi.org/10.1016/j.ecns.2024.101544

Background and Methods

Increasing integration of simulation into education and clinical

Identified need – to conduct self-review of simulation program

INACSL Endorsement Program based on Healthcare Simulation Standards

Findings

Articles outlines 4 Standards as cornerstones of best practice;

Prebriefing

Facilitation

Professional Integrity

Debriefing

Reviewer comments

Offers practical guidance for programs seeking endorsement, thereby fostering a culture of continuous improvement and excellence in healthcare simulation.

Impressive article and opportunity- I did not know this existed! Very well written.



Clinical Simulation in Nursing (2 of 13)

Verkuyl, M., Furman, GE. & Costandine, N. (2024). Practical Suggestions to Align with Standards: Findings from Endorsement Reviewers. https://doi.org/10.1016/j.ecns.2024.101531

Background and Methods

Simulation Endorsement Program commenced in 2022

32 educational and 2 hospital-based programs reviewed

Reviewer training

Findings

A number of common areas identified as not met or partially met during the review process

Shared insights & practical suggestions offered to meet specific criteria

Reviewer

Helpful especially for universities/sim centers looking to obtain accreditation and to understand where improvements are needed when sim standards are not met.

Well written article with very important information.



Clinical Simulation in Nursing (3 of 13)

Sammons, JN., Groom, JA., Kardong-Edgren, S. & Simmons, VC. (2024). Objective Structured Clinical Examinations (OSCEs) for High-Stakes Assessment of Certified Registered Nurse Anesthesiologists (CRNAs). https://doi.org/10.1016/j.ecns.2023.101480

Background and Methods

CRNAs must demonstrate competency in high stakes assessment

Miller's Pyramid of competency used to explore use of OSCEs for this purpose

Modified Delphi of 10 experts to design & execute OSCE anaphylaxis sim scenario at 3 proficiency levels

Performance checklist, global rating scale, usability survey

Findings

System usability score below target of 75.

Assessment tools were not highly correlated among panelists

However, mean performance scores showed statistically significant differences (p<.001)

Process of OSCE design, execution & utility

Although results indicated OSCEs not recommended for high-stakes assessment, provides direction for future papers.

Reviewer comments

Although the study did not yield significant findings for this particular scenario, it explores important concept for utilization of OSCEs for competency

provides a rigorous method for developing high-stakes competency assessments, which many nursing educators are currently trying

Clinical Simulation in Nursing (4 of 13)

Rogers, BA. Killam, LA. Lockhart, RD., Foltz-Ramos, K., Luctkar-Flude, M., Campbell, SH., Tyerman, J., Ehmke, M. & Franklin, A. (2024). Prioritizing Simulation Facilitators' Competencies for Professional Development Using Q-Methodology. https://doi.org/10.1016/j.ecns.2024.101527

Background and Methods

Gap in prioritizing facilitator competency development

FCR = 29 statements

Q-methodology

73 simulationists prioritized FCR statements

Correlation & factor analysis characterized differing viewpoints

Findings

2 viewpoints accounted for 41.5% variance

Most important = creating psychologically-safe environments

Least importance = administrative tasks

Distinct views: facilitating metacognition during sim

debriefing Vs structuring debriefing

Offers direction for professional development

This is the start of meaningful conversations around simulation facilitator competency, what to do, and how to do it. Simulations are only as good as the facilitator.

Needed!!! Influential in Academia and Hospital based.

Reviewer

comments



Clinical Simulation in Nursing (5 of 13)

Saghafi, F., Blakey, N., Guinea, S., & Levett-Jones, T. (2024). Effectiveness of Simulation in Nursing Students' Critical Thinking Scores: A Pre-/Post-Test Study. https://doi.org/10.1016/j.ecns.2023.101500

Background and Methods

Final year UG nursing students' critical thinking 15-hour program including 9 hours simulation Clinical Reasoning cycle + Debriefing for Meaningful Learning

N=56 students from 5 campuses

Pre/post paired t-test – Health Sciences Reasoning test

Findings

Positive post scores - (95% confidence interval 0.206-2.079)

62.5% of participants achieved 2 scores higher following the program

Reviewer comments



Outlines some ways of increasing critical thinking and clinical judgement for students that can also be applied to licensed nurses as well.

Clinical Simulation in Nursing (6 of 13)

Decker, S., Sapp, A., Bibin, L., Brown, MR., Crawford, SB., Jabeen Fayyaz, J., Johnson, BK., & Pittman, JS. (2024). The Impact of the Simulation Debriefing Process on Learning Outcomes – An Umbrella Review Protocol. https://doi.org/10.1016/j.ecns.2023.101505

Background and Methods

Gap in literature re impact of debriefing on simulation learning outcomes

Umbrella review protocol – identification, critical appraisal & synthesis

Focus on knowledge, skills, attitudes & behaviors

Findings

Protocol outlined:

An interprofessional group with librarian assistance

5 databases / review articles/ Joanna Briggs methodology

Abstracts meeting inclusion criteria – full text review

Expected to inform evidence-based practices specifically for inclusion, trust and safety

Reviewer comments

Will have a significant impact once the work is complete and the limitations and recommendations are available to strengthen the support for it being adopted as a protocol.

The sim community has long held "the learning is in the debrief" and this article can provide us with additional evidence and maybe specificity related to "what about the debrief."



Clinical Simulation in Nursing (7 of 13)

Dodson, TM., & Reed, JM. (2024). Enhancing Simulation Preparation: Presimulation Role Rubrics and Expert Modeling Videos. https://doi.org/10.1016/j.ecns.2023.101498

Background and Methods

Role assignment in sim often met with anxiety, fear, unknowns

Role rubrics & expert modelling videos can support the process

N=13 junior students MS course

Quant cross-sectional design + content analysis

Reviewer comments

Videos to role model in simulation is such a unique idea as we work to ensure preparation in simulation. Practical and useful for all simulationists.

Findings

All participants indicated they had read the role rubric and did role-playing to prepare

Expert modelling reduced anxiety

The use of strong modelling has great potential especially in undergraduate nursing education.



Clinical Simulation in Nursing (8 of 13)

DeFoor, M., Irons, A-M., Glover, A., Russell, B., & Darby, W. (2024). Seeing Beyond the Screen: Integrating Trauma- and Violence-Informed Care During a Telehealth Simulation. https://doi.org/10.1016/j.ecns.2023.101473

Background and Methods

Findings

Intimate partner violence is prevalent – may escalate during pregnancy

Unique re-debrief session created in response to learning needs

Telehealth sim experience developed & evaluated - senior maternal nursing students with SPs

Students need opportunities to provide safe care for diverse populations particularly re IPV

Frameworks: trauma- and violence-informed care

Approach ideally suited learning needs and outcomes



Timely simulation and practical way to teach these concepts.

Very instructive. The manuscript presented the simulation with both a theoretical and practical perspective. After reading this article, it feels possible to incorporate this simulation in undergraduate nursing



Clinical Simulation in Nursing (9 of 13)

Todd, MJ., Manz, JA., Iverson, L., Ball, SJ. & Manning, L. (2023). Conceptual Framework and Content Validity for the Creighton Competency Evaluation Instrument 2.0© (C-CEI 2.0©). https://doi.org/10.1016/j.ecns.2023.101467

Background and Methods

2 tools used for past 15 years

Revisions undertaken and content validity explored

- 3 content validity surveys
- 2 focus groups
- Iterative tool revision

Findings

Each item deemed:

- essential for inclusion
- Reflective of the category
- Easy to understand

Overall mean of 3 combined categories was positive (M=3.65, SD= 0.59)

Findings suggest C-CEI 2.0© demonstrates strong content validity

Reviewer comments

Content validation of revised version of a well-know and widely used instrument to rate nurses' clinical competence.

Widely used instrument and the integration of CBE is essential in nursing education. This article impacts many curricula related to CBE in nursing.



Clinical Simulation in Nursing (10 of 13)

Kobeissi, MM. (2023). Enhancing Simulation: A Roadmap for Integrating the Electronic Health Record into the Nurse Practitioner Curriculum. https://doi.org/10.1016/j.ecns.2023.101460

Background and Methods

EHR technology is complex, some may struggle with navigating for data retrieval, documentation & time management

Benefits of academic institutions to partner with health care organizations and EHR vendors' training playgrounds

Findings

Article provides strategies for leveraging health IT in curricula to best prepare technology proficient workforce

Need to ensure workforce meets the needs of diverse individuals, populations and health care systems



Collaborations with IT will aid in transition for student to entry level worker more seamless and decrease stress in new nurses.

Documentation is something that all nursing students struggle with post academia and developing a way to incorporate into learning enables more proficient clinicians



Clinical Simulation in Nursing (11 of 13)

Díaz, DA., Murillo, CL., Bryant, K., Todd, A., Uzosike, A. & Foronda, C. (2023). The Use of Racial and Ethnic Health care Disparities in Simulation-Based Experiences: A Systematic Review. https://doi.org/10.1016/j.ecns.2023.101440

Background and Methods

Important to help learners address racial and ethnic disparities

Systematic review to explore how these areas are represented in SBE

6 databases explored – supported by librarian

Findings

From 1418 articles 30 included in the review

Need identified to standardize reporting of key characteristics of the SBE

Sim standards and formal debriefing methods should be used

Future students need to unify terms, evaluate instruments & specify methodologies used

Reviewer comments



Provides insight on how HCD are being represented and addressed in simulation. Gaps were identified and recommendations made related to the design of SBEs that focus on HCD, a framework (Cultural Humility) was also recommended to guide future work.

Gives insight into the current state of using simulation to address Health Care disparities. This is currently an important topic for healthcare. Appreciated the direction for future research.

Clinical Simulation in Nursing (12 of 13)

Ness, M., Sherraden Bradley, C. & Beck Flaten, C. (2023). Gender Affirming Postop Care Simulation for Prelicensure Nursing Students: A Pilot Project. https://doi.org/10.1016/j.ecns.2023.101432

Background and Methods

Need to provide opportunities for learners to understand care needs for this group of health consumers

QI project pre/post test design

10 Master of Nursing students20-minute sim/ Debriefing for Meaningful Learning

Findings

Knowledge, skills, comfort and attitudes mean scores improved following simulation and debriefing

Positive student experiences

Opportunity to practice gender-affirming language, communication and nursing skills

Reviewer comments

Excellent study to enhance the clinical practice

IMPORTANT TOPIC!



Clinical Simulation in Nursing (13 of 13)

Wilbeck, J., Nelson, B., May, E., Moss, C. & Steanson, K. (2023). Innovative Simulations to Support Nurse Practitioner Competencies: Pediatric Doorway Assessments. https://doi.org/10.1016/j.ecns.2023.03.004

Background and Methods

Findings

NP education requires acquisition of diverse, complex competencies

The sim supported attainment of core, population and specialty competencies at advanced levels

Need to connect knowledge with advanced clinical practice

Challenges = budgets, workload, distance education and student numbers

Faculty developed and implemented pediatric focused sim

Strategies needed to adapt low-resource simulations to increase complexity across curricula

Reviewer comments



Collaboration among faculty and staff with standardized set up easily replicated allows for decreased individual workload and broader reach to various NP students.

Education and resources for the advanced practice RN are limited. Provides an excellent resource for NPs to use for further training. This article would be of interest to any NP practice in any field.



Advances in Simulation (1 of 7)



Barlow, M., Morse, K.J., Watson, B. et al. Identification of the barriers and enablers for receiving a speaking up message: a content analysis approach. Adv Simul 8, 17 (2023). https://doi.org/10.1186/s41077-023-00256-1

Background and Methods

- Speaking up is a known challenge in healthcare, especially between professions with status differential.
- 22 IP sims with an embedded sim nurse who tried to communicate concerns using different approaches: how the message was delivered (verbose or abrupt wording), was manipulated and counterbalanced across the simulations.
- Barriers and enablers of being a receiver of a message were explored in the debrief (n=138 participants) and the debrief was subjected to content analysis.

Findings

- Context matters especially in front of patient made it difficult for receiver to know what to do
- Hint and hope approach was problematic (I)SBAR approach frequently didn't have the Recommendation
- Training needed for receivers: to help shift from listening to reply or fix, to listen to understand, manage both the speaker's and their own emotions in the moment, and view speaking up as a shared accomplishment.
- We need to train the speaker and receiver equally through conversational rehearsal of both positive and challenging encounters



This is a very important topic for medicine and other professions. By examining and being aware of our own responses to messaging we are able to support our learners at all levels appropriately and potentially increase patient safety.



The findings in this article with respect to message sender and receiver can be extrapolated and studied with multiple professions and multiple contexts. The broad application of this article to any profession, any level of learner, and multiple contexts makes it influential...



Advances in Simulation (2 of 7)



Brazil, V., Reedy, G.B. Translational simulation revisited: an evolving conceptual model for the contribution of simulation to healthcare quality and safety. Adv Simul 9, 16 (2024). https://doi.org/10.1186/s41077-024-00291-6

Background and Methods

- The term 'translational simulation' was proposed in 2017 as a "functional term for how simulation may be connected directly with health service priorities and patient outcomes, through interventional and diagnostic functions" (Brazil V. Adv Simul. 2:20, 2017).
- Many have used translational simulation how and why?
- "Translational simulation is a conceptual framing rather than a technique, taxonomy, or label"
- Citation analysis and reflection and updating the model of translational simulation

Findings

Three key components of translational simulation:

Purpose: Exploring and Improving healthcare quality – healthcare is a complex adaptive system and must be explored and understood before intervening

Process: Use existing frameworks and data collection tools that help us to accomplish the process of exploring and improving – we don't need new ones

Conceptual Foundations: Different ways of thinking help ground our work so that the frameworks and tools are used appropriately and help us engage with new communities of practice and research (e.g. learning sciences, quality and safety, systems modelling, org behaviour)



A common barrier to the incorporation of simulation is a lack of understanding by stakeholders of what exactly simulation is, and how it could benefit employees and ultimately patient outcomes; this article looks to frame terminology and better illustrate how simulation positively assists participants to become better communicators, teammates and practitioners.



Provides a framework for leveraging simulation beyond education, directly targeting quality improvement and safety.



Advances in Simulation (3 of 7)

Szabo, R.A., Molloy, E., Allen, K.J. et al. Leaders' experiences of embedding a simulation-based education programme in a teaching hospital: an interview study informed by normalisation process theory. Adv Simul 9, 21 (2024). https://doi.org/10.1186/s41077-024-00294-3

Background and Methods

- Qualitative interview study (n=14) exploring the experiences of those seeking to embed, integrate, and sustain simulation programmes
- Simulation leaders (n=14) from Australia and North America interviewed and analysed using RTA
- Normalisation process theory (May et al) from implementation science used as a sensitising framework

Findings

- Four themes were generated from the data: (1) Leadership, (2) business startup mindset, (3) poor understanding of simulation undermines normalisation and (4) tension of competing objectives.
- Business startup thinking, survival discourse, and the importance of relationships were all present in the data
- "A shared understanding of the purpose and breadth of simulation is a
 prerequisite for embedding and sustaining simulation. An approach of
 marketing simulation beyond simulation-based education as a patient
 safety and systems improvement mindset, not just a technique nor
 technology, may assist towards simulation being sustainably
 embedded within teaching hospitals."



is a great demonstration of the multiple factors that need to be addressed as one attempts to normalize utilization of simulation in various environments, while posing integral questions that would have to be answered to provide insight on the potential success or failure of said program.



Provides actionable insights into overcoming barriers to embedding SBE programs in academic institutions.



Advances in Simulation (4 of 7)



Sullivan, C.C., O'Leary, D.M., Boland, F.M. et al. A comparative analysis of student, educator, and simulated parent ratings of video-recorded medical student consultations in pediatrics. Adv Simul 9, 10 (2024). https://doi.org/10.1186/s41077-024-00282-7

Background and Methods

- Goal to better understand how multisource feedback (self, educator, and simulated parent) may inform learning and curriculum design in paediatric medical education.
- Med students did consult with a simulated parent, with video-assisted self-reflection, and got feedback from an educator and simulated parent
- The Pediatric Consultation Skills Assessment Tool (PCAT)
 was used for self-assessment and educator feedback, and
 the Consultation and Relational Empathy (CARE) measure
 was used for simulated parent feedback.

Great reference to show those who need convincing that SPs can give valuable feedback. Multisource feedback allows students to develop layered insights into their performance and supports self-appraisal. Aggregating feedback through an e-learning platform allows educators to gain greater insights into the strengths and weakness of students and design a more tailored teaching plan to support student needs.

Findings

- High-performing students underrated their performance, and low-performing students overrated their performance.
- MSF helps to identify both areas of weakness in student performance and areas of weakness in student self-appraisal. Learners were weakest making contingency plans and providing easy-to-understand explanations for simulated parents.
- Some simulated parent feedback did not align with educator and student ratings, highlighting the value of including the simulated parent perspective.
- The misalignment shines a light on real learning opportunities; the challenge lies in helping learners value these differences and integrate these insights into future learning goals.

Reviewer comments

The need for simulated patients to be able to provide feedback to learners as a patient voice is invaluable. I will be forwarding this article to our clinical faculty.





Advances in Simulation (5 of 7)



Lovink, A., Groenier, M., van der Niet, A. et al. How simulated patients contribute to student learning in an authentic way, an interview study. Adv Simul 9, 4 (2024). https://doi.org/10.1186/s41077-023-00277-w

Background and Methods

- Simulated patients (SPs) play an instrumental role in teaching communication skills and enhancing learning outcomes. Most studies look at the student perspective on the interaction.
- This study focuses on how SPs see their contribution to meaningful student learning experiences during SPstudent encounters.
- Interviews of 15 SPs exploring their perspectives on meaningful learning experiences during SP-student encounters
- In-depth, semi-structured interviews were analyzed using thematic analysis.

Findings

- SPs view their contribution to meaningful student learning during SP-student encounters from two perspectives: a collective perspective as a member of the community of SPs, and an individual perspective.
- Collectively, multiple varied SP-student encounters over time creates meaningful learning for students.
- Individually, SPs talked first about acting as the patient in the role description, second, as a teaching aid and third, as an individual with personal experiences, beliefs, and values. The relative importance of these different positions can vary within and between encounters.
- Understanding and appreciating the fullness of the SP perspective contributes to authentic SP-based experiences.



Knowing how SPs view their work helps us be able to better professionally develop our SPs.





Advances in Simulation (6 of 7)



Verkuyl, M., Violato, E., Harder, N. et al. Virtual simulation in healthcare education: a multi-professional, pan-Canadian evaluation. Adv Simul 9, 3 (2024). https://doi.org/10.1186/s41077-023-00276-x

Background and Methods

- Impact evaluation of virtual simulations created for the virtual work-integrated learning (Virtu-WIL) program, a pan-Canadian project designed to develop, test, and offer virtual simulations to enrich healthcare clinical education in Canada. Virtual simulations are freely available globally through creative commons licensing.
- Students self-reported their experiences with the virtual simulations and the impact on their readiness for practice using a survey that included validated subscales. Openended items were included to provide insight into the students' experiences.

Findings

- Nursing, Paramedicine and Medical Laboratory students (n=1715) enrolled in the Virtu-WIL program from 18 postsecondary universities, colleges, and institutions responded to the evaluation survey.
- Most students (86.2%) found the virtual simulations engaging and helped them learn and prepare for clinical practice.
- It is not sufficient to simply add virtual simulations to curriculum, careful planning and applying simulation pedagogy are essential.
- Virtual simulation, when sound pedagogy and curriculum planning are applied, can be an engaging and effective way for students to prepare for clinical practice.



Reviewer comments

This article establishes that virtual simulations can be a valuable form of simulation utilized by different healthcare professionals, and can be enhanced with the addition of a debrief



Advances in Simulation (7 of 7)



Mutch, J., Golden, S., Purdy, E. et al. Equity, diversity and inclusion in simulation-based education: constructing a developmental framework for medical educators. Adv Simul 9, 20 (2024). https://doi.org/10.1186/s41077-024-00292-5

Background and Methods

- Study aims: (1) explore the extent to which an existing competency framework for medical teachers to teach ethnic and cultural diversity is relevant for simulation educator competency in EDI; (2) informed by the data gathered, to construct a modified competency framework in EDI for simulation educators.
- Sim faculty (n=10 simulation faculty) engaged in a 5month EDI focus, using the SIM-EDI tool in faculty debriefing conversations.
- Interview x2 and analysed transcript data using an existing EDI competency framework (Hordijk et al 2019) as the initial coding framework, and dynamic thematic analysis.

Findings

- Hordijk et al (2019) framework was relevant for simulation faculty.
- Modifications included the incorporation of two inductively coded themes ('team reflection on EDI' and 'collaboration'), and minor amendments for healthcare simulation.
- Resulting Developmental Framework for Simulation Educators in EDI outlines 10 developmental areas needed to incorporate consideration of EDI into simulation programmes during the design, delivery and debriefing phases.
- The framework, informed by qualitative data, acts as a basis for simulation faculty development in EDI.



Reviewer comments

I can apply this framework immediately for including faculty development to ensure EDI are discussed.

Journal of Healthcare Simulation (1 of 6)



Britt, T., Xing, K., & Leighton, K. The Simulation Educator Needs Assessment Tool (SENAT): the development and validation of a tool for simulation onboarding and professional development. International Journal of Healthcare Simulation.2023 Nov 8:1-8. doi.org/10.54531/gosh2567

Background and Methods

- The Simulation Educator Needs Assessment Tool (SENAT) was created for self-assessing individuals' knowledge and perceived competency in simulationbased education
- · Items created through literature review.
- Messick's unified validity framework was used as a validity framework to review items (2 rounds by 22 CHSE-As) and then 147 simulaitonists

Findings

- The final SENAT contained 29 items with a satisfactory content validity index for each item. Two subscales were found with good to excellent reliability: Self-assessment of Learning Needs; and Competence with Simulation Modalities.
- Provides a professional development roadmap, as well as data needed to develop mentoring conversations.

Reviewer comments



a valuable resource for **enhancing the quality of simulation-based education**, which is particularly **important for developing centers seeking continuous improvement** in the processes of creating and evaluating simulations.

Provides validation for an assessment tool to evaluate the needs of a simulation educator, offering a standardized approach to faculty assessment and development that may help simulation programs achieve and maintain certain SSH accreditation standards.

Journal of Healthcare Simulation (2 of 6)

Hobgood C, Ahmed RA, Cooper DD, Bona A, Heniff M, Sarmiento EJ, Falvo L. HEEALing after an error—use of the novel mnemonic HEEAL to structure error disclosure to patients and peers. 2023 Oct 11:1-8. 10.54531/lgeg4471

Background and Methods

- Developed a simple mnemonic, 'HEEAL', which addresses the key elements of a medical error disclosure (Honesty, Empathy, Education, Apologize/ awareness, Lessen future impact)
- AIMS: 1) to determine the feasibility of providing a simple educational intervention using the HEEAL mnemonic and 2) to assess the intervention's ability to improve communication self-efficacy, knowledge and objective measures of error disclosure competence among providers.
- A curriculum was created and repeated twice by 14 learners (medical students). Pre- and post-intervention written measures of knowledge and confidence were obtained Assessment of observed clinical skills was scored by the involved SP (standardized patient).

error to patients and colleagues.

Findings

- Learners demonstrated statistically significant improvement in their confidence in medical error disclosure, knowledge and performance of peer-disclosure skills.
- This pilot data suggest that the HEEAL intervention provides an effective and efficient way for medical educators to teach senior medical students how to provide competent error disclosure to both patients and peers.

Reviewer comments

A novel and accessible mnemonic for error disclosure...Offers a systematic approach to improve provider capacity to effectively communicate medical

Demonstrates the power of simulation in training for this area, which involves influencing the behavior of future doctors by providing them with the necessary tools to handle medical errors ethically and effectively. The HEEAL program can be adapted and utilized in medical training programs to better prepare students for dealing with medical errors. Moreover, the article lays the foundation for testing this system on a larger scale.



Journal of Healthcare Simulation (3of 6)



Combs RM, Decker HR, Noonan EJ, Weingartner LA, Bohnert CA. Gender minority portrayal in patient simulation: transgender and non-binary healthcare providers consider the priorities and ethics of practice. 2023 Oct 11: 1-10. 10.54531/zsan7948

Background and Methods

- Increasingly, medical educators are utilizing patient simulation to teach gender-affirming clinical skills. However, institutional practices vary with no guidance for ethical practice.
- Gender minority healthcare providers offer an important perspective due to their patient simulation experience and embodied knowledge.
- 21 Transgender and non-binary healthcare providers and trainees took part in semi-structured interviews that focused on their experiences with, and perceptions of, simulation and genderaffirming care.
- Data were analyzed using inductive thematic discourse analysis.



The study can influence the behavior of health educators by raising awareness about the needs and experiences of gender minorities. By considering the study's recommendations, educators can develop more inclusive and respectful simulations.

Findings

- the core themes :the impact of gender minority portrayal in simulation and the potential for harm to gender minorities working as simulated patients.
- Casting gender minorities in gender minority roles is the gold standard.
- In situations where this is not possible, participant opinion diverged on whether it is preferable to cast cisgender simulated patients or cancel the case.
- Participants described gender-affirming patient simulation as impactful.
- They noted the potential for harm to gender minority simulated patients due to repeated learner errors.

Advocates for simulationists to engage gender minority communities, **embodied knowledge and lived experiences to create more authentic and respectful representations of diverse gender identities.** By calling upon semi-structured interviews with gender diverse healthcare providers and trainees, it models an approach to collaborating with diverse perspectives during case development.



Journal of Healthcare Simulation (4of 6)

Clarke I, Philpott L, Buttery A. Pilot study: design, delivery and evaluation of a co-produced multi-agency mental health simulation-based education programme. International Journal of Healthcare Simulation. 2023 Sep 30:1-12. 10.54531/qzcr2106,

Background and Methods

- This innovative work involves 40 service users and carers in the design, delivery and evaluation of an experiential, mental health, SBE programme for health and social care professionals, and multi-agencies.
- Mixed methods approach, that included analysis of data collected from pre/post participation surveys and thematic qualitative data analysis

Findings

- .Analyses constructed themes around safety, responsiveness, empathy, stigma and experience.
- Increased confidence and understanding of roles following participation in the programme.
- Positive changes in empathy and respondents' perspectives and behaviours were also reported.
- Implications for practice and mental health care are relevant to multi-agency professionals, service providers, service users, carers and families.

Reviewer comments

Explores the use of simulation-based education (SBE) to enhance interagency collaboration in mental health care, a relatively uncharted area in training processes that broadens the scope of simulation applications. Moreover, by involving service users and caregivers in the design, implementation, and evaluation of the program, the study emphasizes the importance of a patient-centered perspective.



Explores the **under investigated area** of simulation education within behavioral/mental health, providing insight into the co-design of curriculum and that curriculum's **impact on care providers capacity for safety planning**, **risk management**, **and improved responsiveness to acute mental health symptoms**.

Journal of Healthcare Simulation (5 of 6)



Lowe B, Woolfield A, Matulich J, Brazil VA. Virtual reality laparoscopic simulation for operating theatre efficiency: an outcome logic model program evaluation. International Journal of Healthcare Simulation. 2023 Nov 27:1-9. 10.54531/jyob1534

Background and Methods

- Describes introduction of a comprehensive laparoscopic simulation education program to enhance operative efficiency in gynaecological procedures. Trainees were required to achieve a 'pass' on the LAPSIM® VR simulator prior to operating on patients.
- An outcome logic model was used to evaluate the extent to which the simulation program attained its objectives and outcomes.

increased simulation dose.

 Data analysis involved multivariate linear regression to ascertain the impact of the laparoscopic simulation program on procedure length in the operating theatre.

Findings

- LAPSIM® VR credentialling was performed by 81% of the GCHHS gynaecology registrar cohort in 2021. (n= 21)
- Introduction of the LAPSIM® VR program was associated with a significant reduction in mean operative time for all ectopic pregnancies in all primary surgeon groups.
- Credentialled trainees were no more likely to be a primary operator than those who were not credentialled.
- Survey results revealed that trainees felt the LAPSIM® VR program improved their technical skills, but that other factors influenced their likelihood of being primary operator.

I appreciate the analysis approach, especially using time on task to explain outcomes of VR simulation. It is meaningful to recognize how procedural times shortened with an

Reviewer comments

Robust study on the implementation of a virtual laparoscopic simulation program in a hospital. The study's results show a positive impact on surgical efficiency, specifically in reducing the operative time for laparoscopic procedures.



Journal of Healthcare Simulation (6 of 6)



Violato, E., Corbett, C., Rose, B., Rauschning, B., & Witschen, B.The effectiveness and efficiency of using ChatGPT for writing health care simulations:. International Journal of Healthcare Simulation. 2023 1 Nov:1. doi.org/10.54531/wjgb5594

Background and Methods

- To understand if ChatGPT can be used to write health care simulations effectively and efficiently, simulations written by a subject matter expert (SME) not using ChatGPT and a non-SME writer using ChatGPT were compared.
- Simulations generated by each group were submitted to a blinded Expert Review and evaluated holistically for preference, overall quality, flaws and time to produce.

Findings

- The SME simulations were selected more frequently for implementation and were of higher quality, though the quality for multiple simulations was comparable.
- Preferences and flaws were identified for each set of simulations. The SME simulations tended to be preferred based on technical accuracy while the structure and flow of the ChatGPT simulations were preferred. Using ChatGPT, it was possible to write simulations substantially faster.
- HPEs can make use of ChatGPT to write simulations faster and potentially create better simulations.

Reviewer comments



The potential impact of ChatGPT on health education is significant. When used correctly, it can revolutionize the way simulations are designed and developed. However, it is important to recognize the limitations of this technology and to use it ethically and responsibly.

provides an evidence base for the use of generative artificial intelligence in scenario development. Importantly, it supports that notion that with intentionality and simulationists expert review, ChatGPT can expedite and optimize the scenario development process and produce higher quality simulation scenarios.

Wild Card



Doyle AJ, Sullivan C, O'Toole M, Tjin A, Simiceva A, Collins N, Murphy P, Anderson MJ, Mulhall C, Condron C, Nestel D. Training simulated participants for role portrayal and feedback practices10.1080/0142159X.2023.2241621 in communication skills training: A BEME scoping review: BEME Guide No. 86. Medical Teacher. 2024 Feb 1;46(2):162-78. 10.1080/0142159X.2023.2241621

Background and Methods

- Providing feedback is a key aspect of simulated participants'
 (SPs) educational work. Suboptimal feedback practices may
 deny learners the valuable feedback they need to learn and
 improve.
- This scoping review systematically maps the evidence related to SPs' role as educators and identifies how SPs prepare for their role and feedback practices.
- The results were thematically analysed.

Findings

- 98 studies were included.
- Studies reported the benefit of SPs' authentic role portrayal and feedback interactions for learners and on the reported learning outcomes.
- Data was heterogeneous with a notable lack of consistency in the detail regarding the scenario formats for communication skills training interventions, SP characteristics, and approaches to training for feedback and role portrayal.
- Identified gaps in the implementation of the ASPE SOBP, which promotes effective SP-learner feedback interactions.
- Further research is required to identify effective applications of SP methodology to prepare SPs for their role as educators.



Rigorous and comprehensive research by a group of international scholars providing key evidence related to evidence-informed SP practice and pointing to future directions for essential research related to training simulated participants for role portrayal and feedback in communication settings.



Common themes

- AR / VR / telehealth
- Role of CHATgpt in scenario design
- Debriefing
- Onboarding PD
- Equity, inclusion and diversity
- The role of culture
- Global consensus
- Simulation-based education
 - Distance simulation
 - Medical error disclosure
 - Mental health training
 - Faculty development

- Research
 - Evaluating assessment tools
 - EHR
- Clinical applications
 - Procedural training
 - NP competencies
 - Role modelling
 - Facilitator competencies
- SPs
 - Training for role portrayal and providing feedback
 - Gender minority / transgender/ non-binary
 - Error disclosure
 - Research



Thanks to the reviewers!!



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25TH ANNIVERSARY

LOOKING BACK REACHING FORWARD

QUESTIONS