

consensus with high levels of agreement (where the median was less than or equal to 2 with a small IQR; less than or equal to 1.5) upon 39 statements organised under five sections. The highest ranked statement from each section were included in the final definition and the agreed upon definition is shown in Table 1.

Table 1: Final definition agreed following the modified Delphi technique for the term 'Simulation-based education'

Simulation is a learning tool that supports development through experiential learning by creating or replicating a particular set of conditions which resemble real life situations.

It should provide a safe environment where participants can learn from their mistakes without any danger to patients, allowing individuals to analyse and respond to these realistic situations, with the aim of developing or enhancing their knowledge, skills, behaviours, and attitudes.

Conclusion: This appears to be the first study to have used a Delphi technique to agree an interprofessional definition of SBE at a national level. Future planned work would be to share the developed definition more widely with key stakeholders from across the four nations of the UK. There is scope for this to lead to further work on reaching UK-wide consensus or internationally.

REFERENCES

1. Posner GD, Clark ML, Grant VJ. Simulation in the clinical setting: towards a standard lexicon. *Advances in Simulation*. 2017;2(1):1-5.
2. Keeney S, Hasson F, McKenna H. Consulting the oracle: ten lessons from using the Delphi technique in nursing research. *Journal of advanced nursing*. 2006;53(2):205-212.
3. Hsu CC, Sandford BA. Minimizing non-response in the Delphi process: How to respond to non-response. *Practical Assessment, Research, and Evaluation*. 2007;12(17):1-6.

SCENARIO TEMPLATE: A WELSH PERSPECTIVE

Bridie Jones¹, Clare Hawker, Suman Mitra, Sara-Catrin Cook, Cristina Diaz-Navarro, Alice Hoole, Bethan Bartholomew; ¹*Health Education Improvement Wales, Bridgend, United Kingdom*

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Background: Simulation is an educational approach in health and care that is often used to address patient/service user safety issues, technical and non-technical skills, teamwork, problem solving, and decision-making. The goal of simulation is to create an authentic learning experience. To be effective it needs to be designed and planned appropriately [1]. Following feedback from a health and care simulation community at webinars and other engagement events, a designated simulation team has designed a scenario template to promote the development and sharing of high-quality standardised scenarios.

Methods: A scoping exercise was undertaken to review and identify relevant literature and published scenario templates. A database search was undertaken through CINAHL, Pubmed, and Medline using the search terms: simulation, simulation scenarios, scenario template, simulation guidance, using a time-frame of 2010 to 2022.

Findings: The lack of breadth of literature on scenario writing was a surprising finding. However, the available literature identifies that an effective robust scenario must consider the prospective learners and the intended learning objectives and outcomes. Additionally, knowledge of educational principles and best practices in both simulation and clinical practice are needed [2]. Scenario design must also consider the modality and fidelity of the simulation, faculty members,

use of supplementary resources, moulage, other participants, simulators, and/or standardized patients [3]. An evidence-based scenario template was developed and peer reviewed. It was then presented to and tested by the health and care simulation community during a free, inclusive, and well attended scenario writing online workshop facilitated by a simulation team in collaboration with experts.

Conclusion: The scenario template provides step-by-step guidance on scenario writing best practice and includes a didactic element by signposting to further reading. It was revised based on constructive comments made by the health and care simulation community, which included more prescriptive facilitator guidance, and will be published via simulation web-pages as an open access resource for use by anyone across the health and care simulation education and training workforce (<https://heiw.nhs.wales/files/simulation-scenario-template/>). The team is aiming to further evaluate the use of the template, with the intention of contributing to further evidence base in this area.

REFERENCES

1. Dieckmann P, Gaba D, Rall M. Deepening the theoretical foundations of patient simulation as social practice. *Simulation in Healthcare*. 2007;2(3):183-93.
2. Bambini D. Writing a simulation scenario: a step-by-step guide. *AACN advanced critical care*. 2016;27(1):62-70.
3. Harrington D, Simon L. Designing a Simulation Scenario. Accessed via Designing a Simulation Scenario. 2021. StatPearls, NCBI Bookshelf (nih.gov).

HEE PLACEMENT PROJECT -PARAMEDICS IN THE DRIVING SEAT

Amanda Wilford¹, Sean Wheatley¹; ¹*Staffordshire University, Calne, United Kingdom*

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Background: Creating additional placements for undergraduate paramedic learners is being driven by Health Education England (HEE). With the increase in numbers undertaking paramedic training by education providers, there is limited additional capacity for placements within the current placement areas (e.g. Ambulance Trusts).

Methods: Working in partnership with a dedicated simulation team, the paramedic science lecturers co-created a simulated placement. One aspect included the students undertaking a one-day 'Train the trainer course' prior to the day of facilitating led by the simulation lecturer and this course referred to research and best practice standards [1]. Seventy-six third-year students across two different cohorts undertook this activity. From two cohorts, eleven different simulation activities were created. Three focused on trauma injuries (e.g., a severed arm in a factory). In the remaining eight simulation designs, the paramedic students chose areas of their professional practice they wanted to focus on, including a lady with domestic violence.

Results: All students were asked to complete an online evaluation tool that focused on their learning both as a facilitator and as a learner undertaking their peers' simulation activities. Overwhelmingly all seventy-six learners rated their own experiences as a facilitator highly, citing that to create their own designs, they had to revisit course work and search for evidence and guidelines. This aspect they felt improved their knowledge and confidence. Reviewing the data as a learner, the paramedic students felt the scenarios were richer and closer to practice and provided a richer

discussion. Participating in debriefing as both the facilitator and learner, the participants reported that they felt more comfortable about critiquing care that learning how to use open questions.

Conclusion: The students created their own community of practice [2] and actively sought literature and evidence-based practice to create the designs and the parameters and behaviours for their own cases that they facilitated. The debriefing sessions evolved into reflection surrounding their identity and the agency of practice in the clinical arena. As faculty, the expectations prior to this project were that the designs created would be trauma only and found all were authentic and professionally written. The faculty will be implementing this project across all years of undergraduate training for paramedics. Supporting students to write and deliver their own SBES at intervals allows them to be involved in their own learning. This additional knowledge and skills will assist them into professional practice.

REFERENCES

1. Persico L, Belle A, DiGregorio H, Wilson-Keates B, Shelton C. Healthcare simulation standards of best practice™ facilitation. *Clinical Simulation in Nursing*. 2021;58:22–26.
2. Wenger E. *Communities of practice: learning, meaning, and identity*. 1999. Cambridge, UK, Cambridge University Press.

CO-DESIGN: A GUIDED REFLECTIVE LEARNING CONVERSATION MODEL FOR SIMULATION-BASED EDUCATION

Emad Almomani¹, M Jacqueline Sullivan¹, Omar Saadeh¹, Emad Mustafa¹, Natalie Pattison², Guillaume Alinier^{1,2,3,4}; ¹Hamad Medical Corporation, Doha, Qatar, ²Faculty of Health and Social Work, University of Hertfordshire, Hatfield, United Kingdom, ³Faculty of Health and Life Sciences, Northumbria University, Newcastle upon Tyne, United Kingdom, ⁴Faculty of Weill Cornell Medicine-Qatar, Qatar, Doha

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Background: The critical care environment is stressful with complex clinical cases and high levels of workload [1]. Adequate exposure to various clinical experiences is essential to develop effective clinical reasoning skills [2]. Taking into consideration the risk of clinical practice mistakes and the importance of patient safety, simulation is an effective method to immerse learners in scenarios that mimic clinical situations with focused learning opportunities. Guided reflection through reflective learning conversations following simulation activities is recognized as an effective method to develop clinical reasoning skills [3]. We describe a co-design process to develop a simulation guided reflective learning conversation model to optimize the clinical reasoning skills for critical care nurses attending simulation-based activities. **Methods:** A co-design working group of 10 critical care nurses of varying levels of seniority, experience, nationality, and gender; two critical care doctors; three patient representatives; 2 researchers, and 5–6 critical care educators are working collaboratively to co-design the guided reflective learning conversation model, in which clinical reasoning can be optimized with consideration to a wide range of case complexity, subspecialty, and competence levels. The co-design working group is meeting online for 4–6 workshops of 4 hours. The co-design process is built on valid and reliable clinical reasoning and educational theoretical frameworks and models. The inputs to the process, exercises, and activities

are taking place during the workshops and the outputs of the workshops are described to establish the co-design process. The final draft of the model will be validated and tested. The study sample will be grouped into experimental and control cohorts of critical care nurses who attend critical care simulation-based courses (N=300). Data will be collected through surveys, focus groups, and simulation-based objective assessment and observations. The study has received Institutional Review Board approval from the Hamad Medical Corporation Medical Research Centre (MRC-01-22-117) and the University of Hertfordshire (HSK/PGR/UH/04728).

Results: The first draft of the co-design model is presented in Figure 1. The final draft of the model will be released, validated, and tested in the near future using mixed methods research with comparative quasi-experimental and pre-test/post-test design.

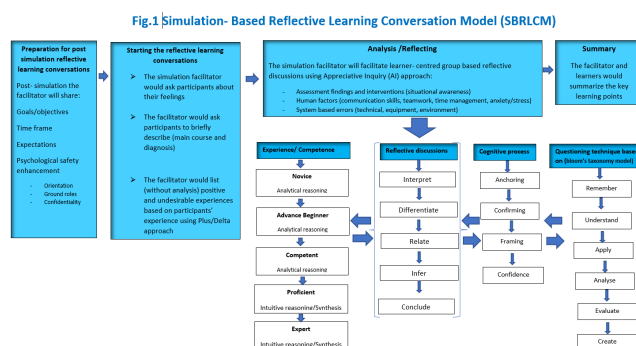


Figure 1: Simulation-Based Reflective Learning Conversation Model (SBRLCM) under development

Conclusion: Clinical reasoning is multidimensional with difficulty to structure and evaluate during debriefing. Developing a guided reflective learning conversation model in which clinical reasoning skills are actively and effectively embedded, would therefore enable critical care nurses developing clinical reasoning skills to meet the special demands of critical care.

REFERENCES

1. Vahedian-Azimi A, Hajiesmaeili M, Kangasniemi M, Fornés-Vives J, Hunsucker RL, Rahimibashar F, Pourhoseingholi MA, Farrokharvar L, Miller AC. Effects of stress on critical care nurses: a national cross-sectional study. *Journal of intensive care medicine*. 2019;34(4):311–22.
2. Kang H, Kang HY. The effects of simulation-based education on the clinical reasoning competence, clinical competence, and educational satisfaction. *Journal of the Korea Academia-Industrial cooperation Society*. 2020;21(8):107–14.
3. Decker S, Alinier G, Crawford SB, Gordon RM, Jenkins D, Wilson C. Healthcare Simulation Standards of Best Practice™ The Debriefing Process. *Clinical Simulation in Nursing*. 2021;58:27–32.

VIRTUAL REALITY WRAPAROUND LEARNING MODULES: AN INNOVATIVE APPROACH TO SELF-DEBRIEFING TO AUGMENT LEARNER EXPERIENCE

Lekha Agarwal¹, Charleen Liu¹, Georgia Winnett¹; ¹Addenbrookes Hospital, Cambridge, United Kingdom

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Background: Virtual Reality (VR) simulation has opened to a lot of trainees an ability to experience various clinical scenarios in a virtual space at a time and place that suits them [1]. It also gives an opportunity for deliberate practice as one can repeat the scenario as many times as one likes till proficiency is reached. Research over the years has shown most of the learning occurs