

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/157448/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Hawker, Clare , Jones, Bridie, Cook, Sara- Catrin, Mitra, Suman, Hoole, Alice, Bartholomew, Bethan and Diaz-Navarro, Cristina 2022. Developing an All-Wales definition of Simulation-Based Education. International Journal of Healthcare Simulation 2 (1) , A40-A41. 10.54531/INHM4618

Publishers page: <https://www.ijohs.com/article/doi/10.54531/INHM461...>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



and build their confidence with managing such situations. The VSP was designed for 10 hours of learning and was made available to adult nursing students from 37 Poltekkes across the Indonesian continent.

Results: The VSP project was delivered on time with the evaluation from the pilot group being overwhelmingly positive with 82% of respondents being satisfied with the quality of VSP (response rate of 30% n=51/171). The key themes identified were: 'real-life patient scenarios based on holistic and patient-centered care' and the VSP enabling learners to use 'critical thinking skills and relate the content to previous knowledge' gained on their course so far.

Conclusion: VSP is a meaningful way of enhancing exposure to experiences that are not guaranteed for all learners leading to greater equity of experience. The reflective and blended nature of the VSP leads to a better understanding of difficult topics. The VSP platform enables knowledge transfer that allows our team to take our in-house digital innovations to a global platform to support the training of the future nursing workforce of Indonesia.

REFERENCES

1. Akselbo I, Olufsen V, Ingebrigtsen O, Aune I. Simulation as a learning method in public health nurse education. *Public Health Nurs.* 2019;36(2):226–232.
2. Bogossian FE, Cant RP, Ballard EL, Cooper SJ, Levett-Jones TL, McKenna LG, Ng LC, Seaton PC. Locating 'gold standard' evidence for simulation as a substitute for clinical practice in prelicensure health professional education: a systematic review. *J Clin Nurs.* 2019;28(21–22):3759–3775.
3. Mills BW, Carter OB, Rudd CJ, Ross NP, Claxton LA. 2015. Clinical placement before or after simulated learning environments? A naturalistic study of clinical skills acquisition among early-stage paramedicine students. *Simul Healthc.* 2015;10(5):263–269.

USING SIMULATION TO INCREASE MEDICAL STUDENTS' EXPOSURE TO TRAUMA CARE IN A DISTRICT GENERAL HOSPITAL

Eamonn Hickey¹, Joseph Bennett¹, Andrew Greer¹; ¹*Barnsley Hospital, Barnsley, United Kingdom*

10.54531/LIKC4143

Background: When placed in District General Hospitals, medical students have reported limited exposure to major trauma, which is a key part of their Acute and Critical Care curriculum. Several studies have been conducted showing that simulation-based trauma education for undergraduate students can effectively prepare medical students for trauma resuscitation [1]. Targeting 4th year medical students, we sought to enhance their knowledge of, and confidence in, assessment and management of major trauma presentations in an Emergency Department setting through simulation. Key learning outcomes were to understand and perform a primary survey, identify key life-threatening injuries, and perform early interventions in life and limb threatening situations.

Methods: A one-day session was designed, including a pre-course video, practical demonstrations, and an introductory presentation covering primary surveys and management of common trauma presentations. 5 scenarios covered situations across the trauma spectrum, such as tension pneumothorax, severe intracranial bleed and loss of airway, major haemorrhage, and spinal injury. Students were expected to independently assess patients and perform practical procedures if required. Self-reported confidence in trauma management was measured with a pre- and

post-course questionnaire. Responses were recorded on a 7-point Likert scale with open fields for direct feedback.

Results: In the pre-course questionnaire, students reported low levels of confidence in their assessment and management of trauma. In the post-course questionnaire, students reported feeling substantially more confident in assessing, investigating, and managing common diagnoses in trauma patients. Many reported feeling they had insufficient teaching about traumatic presentations during medical school and little prior exposure to simulation-based teaching. After the session, students reported feeling better prepared to work within a trauma team. All students who attended the day found simulation-based teaching to be a useful part of their learning experience.

Conclusion: Targeted trauma teaching introduced as a direct response to students' expressed needs improved knowledge of, and confidence in, managing common and serious trauma presentations. Simulation sessions such as these can help fill gaps in experience that may be associated with placements in non-specialist centres.

REFERENCE

1. Borggreve AS, Meijer JM, Schreuder HW, Ten Cate O. Simulation-based trauma education for medical students: a review of literature. *Medical teacher.* 2017;39(6):631–638.

DEVELOPING AN ALL-WALES DEFINITION OF SIMULATION-BASED EDUCATION

Clare Hawker¹, Bridie Jones, Sara- Catrin Cooke, Suman Mitra, Alice Hoole, Bethan Bartholomew, Cristina Diaz-Navarro; ¹*Health Education and Improvement Wales (HEIW), Nantgarw, United Kingdom*

10.54531/INHM4618

Background: Health Education and Improvement Wales's (HEIW) simulation team is in the process of developing a Simulation-Based Education (SBE) strategy for Wales which will include a definition of SBE. The simulation team originally agreed a working definition of SBE for Wales when the team was formed. However, numerous definitions of simulation or SBE exist in the literature. A shared understanding of SBE is required to optimise its use as an educational strategy [1]. We aimed to reach consensus upon an All-Wales definition of SBE.

Methods: Ethical approval for the study was granted by Cardiff University. A participant information sheet was provided and informed consent obtained from all participants. A modified Delphi technique was used [2], comprising three rounds of online surveys. Definitions and characteristics of simulation described in the existing literature formed the basis of the first survey round [3]. Any statements not reaching consensus and any new statements offered by participants during round one were included in the second survey round. In the final round, participants were asked to rank all statements which reached consensus in rounds one and two in order of priority from 1- the most important to 10- the least important. Responses were inversely scored and collated. Three members of the research team reviewed and validated the consensus statements at the end of each round.

Results: A total of 27 participants from a range of professional backgrounds (nurses, doctors, allied health professionals, and simulation technicians) agreed to be part of the expert panel, of whom 26 (96%) completed the round one survey, 26/26 (100%) returned the round two survey, and 22/26 (81%) responded to the round three survey. Participants reached

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*

10.54531/ATHP5369

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*

10.54531/IQXX3124

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