

EDITORIAL

The inaugural Short Reports on Simulation Innovations Supplement (SRSIS): Creative solutions to real-world problems

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The Short Reports on Simulation Innovations Supplement (SRSIS) aims to provide a platform for the global simulation community to share innovations that potentially provide unique, cutting-edge and practical solutions to gaps, problems or challenges in the day-to-day work of the simulationist. Despite the journal being in its infancy, this first supplement exceeded our expectations. The seven accepted short reports provide innovative technology-based ideas ranging from holograms as embedded participants during a scenario [1] to live distance *in situ* simulations [2]. From the educational theory and curriculum development realm, we had reports that described the use of a virtual reality platform to provide training on how to de-escalate a violent patient (code Black) in the clinical environment using both verbal de-escalation and physical/chemical restraint training that incorporates situational awareness scoring [3] and the development of an international online repository of resources to support the professional development of simulated patient (SP) educators [4]. The quality, ingenuity and brilliance of these innovations will provide solutions to educators around the world, provide improved access to learning opportunities that otherwise would be missed and potentially lead to knowledge gained that will help improve patient care and medical decision-making, and patient safety.

We hope to generate a buzz every 6 months with the SRSIS by highlighting the most innovative and cutting-edge ideas in simulation. We aspire to be the section of IJoHS that readers go to looking for inspiration, ideas for their research and for insight on who is pushing the needle in our community. With that in mind, what are some additional areas of consideration that you, our readers, would like solutions to? Here are a few examples we know that are being discussed at international simulation meetings:

1. *Distance Simulation*: How have you optimized the process at your institution? Do you have internal checklists for preparation for training sessions? How have you overcome obstacles in this environment? Have you used this modality in atypical environments?
2. *Diversity, Equity, Inclusion, Justice (DEIJ)*: Have you developed innovative curricula addressing a particular issue? Identification and management of

DEIJ-related microaggressions? Simulation scenarios that revolve around inclusion? Social justice? Engagement with industry partners to create more diverse simulators?

3. *Return on investment (ROI) & Program Evaluation:* At the system level, have you developed a robust training evaluation system to demonstrate the outcomes, impact and a high return on investment rubric for money spent on simulation resulting in downstream savings to your system? How did you prove it? What obstacles did you overcome to get the data to support your efforts?
4. *Human Factors:* Have you used process mapping to better understand the role of human factors in the design of your simulations? Have you leveraged human factors experts in developing a production system design process to improve your distance simulations? What have you found is most successful or streamlines the process for the faculty end users of distance simulation curricula?
5. *Augmented/Virtual/Mixed Reality (AR/VR):* Have you experimented with taking VR to the next level? Mixed reality is a combination of VR and/or AR that allows a user to interact with the real surrounding physical environment with the utilization of haptic sensory feedback [5,6]. Have you attempted to teach procedures in the distance environment by physically moving the hand of the learner at their on-site simulation lab? Have you attempted to train a surgeon on a new technique or a specific skill and manipulate their fingers towards optimizing fine motor skills? Have you used futuristic and immersive visualization and simulation technology such as Cave Automatic Virtual Environment (CAVE), Holographic Pop 3 and Multi-traction 3D walls to teach students?

These innovations will ultimately make the world 'a smaller place', allowing experts to disseminate their knowledge and skills in ways previously unimagined. These innovations move our field forward and provide solutions to problems, old and new.

What ideas do you have that may benefit the simulation community? Have you considered working on a problem with someone with a different skill set? Have you worked with a graduate student from another discipline with the intent to improve simulation? Have you offered expertise to an under-resourced area at your institution to help them overcome obstacles in the provision of high-quality training? Sometimes the best innovations require walking down the hall and talking to people from a different lab, division or discipline!

We'd like to thank the reviewers who gave their time during the process. If you'd like to join our SRSIS reviewer team, Please contact Debra Nestel, Editor for this information.

We hope you will find the reports in the SRSIS valuable, and we look forward to receiving many more submissions for the next supplement. The next submission date is October 31 for the January issue. We invite you to be part of the solution, part of the 'magic' of creativity that advances healthcare simulation. We are excited to share your innovations with the international healthcare simulation community.

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References

1. Diaz DA, Anderson M, Hoffman B, Alegre JV, et al. Feasibility of using holograms as embedded participants in simulation-based education (SBE). *International Journal of Healthcare Simulation*. 2022;1(S1):S9–S11.
2. Keitley JA. Emergency department in situ simulation during COVID-19 with low cost livestreaming. *International Journal of Healthcare Simulation*. 2022;1(S1):S9–S11.
3. Moore N, Ahmadpour N, Brown M, Poronnik P, Davids J. Designing Virtual Reality experiences to supplement clinician Code Black education. *International Journal of Healthcare Simulation*. ;1(S1):S12–S14.
4. Smith CM, Harlim J, Nestel D. Feasibility of online resources to support professional development. *International Journal of Healthcare Simulation*. 2022;1(S1):S14–S17.
5. Våpenstad C, Hofstad EF, Langø T, Mårvik R, Chmarra MK. Perceiving haptic feedback in virtual reality simulators. *Surgical Endoscopy* 2013 Jul;27 (7):2391–2397.
6. Lioce L, editor. *Healthcare simulation dictionary*. Rockville, MD: Agency for Healthcare Research and Quality. 2020.