

## Simulation's Role in Anaesthesia

Steven J. Fowler\*

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Anaesthesia has long been compared to the aviation industry, where even a slight blunder can result in a disastrous accident. Similar to aviation, this necessitates a high degree of competence and diligence. With the growing sophistication of surgeries and the rapid advancement of science and newer medicines, safety is always a priority.

As a result, similar to how simulation is used in aviation training, anaesthesia has been at the forefront of using simulation for training. Patients are highly worried that students and residents are putting their abilities to the test on them. Patient safety is becoming more critical in clinical medicine than bedside teaching and assessment. Anaesthetists work in a field that is constantly changing.

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### EDITORIAL

Anaesthesia has long been compared to the aviation industry, where even a slight blunder can result in a disastrous accident. Similar to aviation, this necessitates a high degree of competence and diligence. With the growing sophistication of surgeries and the rapid advancement of science and newer medicines, safety is always a priority. As a result, similar to how simulation is used in aviation training, anaesthesia has been at the forefront of using simulation for training. Patients are highly worried that students and residents are putting their abilities to the test on them. Patient safety is becoming more critical in clinical medicine than bedside teaching and assessment. Anaesthetists work in a field that is constantly changing. This necessitates sound decision-making and collaboration with the rest of the theatre crew. Simulation, when combined with digital technology, provides an innovative and repeatable training experience. It allows for standardised scenario creation as well as reflective learning. Curriculum restructuring, small group meetings, and self-directed learning through independent study have all helped to solve these obstacles. However, there is still a difference between the classroom and the clinical environment. As a result, medical simulation has been suggested as a tool for bridging this educational gap. David Gaba, MD, describes simulation as an instructional process.

Simulation has come a long way in its growth. It all started with John Lundy's creation of an anatomy laboratory at Mayo Clinic in the 1920s. Then there was "RESUSCI ANNE," a collaboration between Peter Safar, an anaesthesiologist and intensivist, and Bjorn Lind, a toy maker by trade. After that, there was no turning back, and many more, such as SIM one, GAS, and so on, entered the scene. These simulators were critical in the creation of the foundation for anaesthesia patient safety (APSF). Dr. Gaba later applied crew resource management to anaesthesia and coined the term Anaesthesia Crisis Resource Management (ACRM). Multicentric studies show that using simulation training, the initial learning curve for many procedures can be shortened, particularly for beginners.

In two fields of study, modelling has resulted in clinical improvements. A great example is surgical simulators for laparoscopic surgery. Residents who receive Advanced Cardiac Life Support training on simulators are more likely to follow procedure. Stimulation has been shown to be effective in the teaching of basic sciences and critical knowledge, procedural skills, teamwork, and communication in numerous studies. On behalf of the Board of the Anesthesiology Case Reports and my co-editors, I am glad to present the Volume 3, Issue 5 of the journal. The journal established in the year 2018 has now published 6 issues; 2 issues in a year. Average download per article is increasing and on an average there are 25 downloads per paper. All these are promising signs. We could reach this stage through the constant support of Board Members and intellectual generosity of the readers and contributors (authors and reviewers).

Despite the benefits described above, several multicentric studies have pointed out the limitations of this technique. There's no proof that using it enhances patient outcomes. Simulation-based anaesthesia preparation, on the other hand, was correlated with strong, statistically significant positive effects for most outcomes as compared to no intervention. Small effects on happiness, intelligence, and ability, as well as significant effects on behaviour, have been observed when compared to non-simulation teaching. The dedication and ingenuity of healthcare simulation to see that enhanced patient safety using this method becomes a fact depends on the potential application of simulation in anaesthesia. "No industry in which human life depends on the professional success of responsible operators has waited for unequivocal proof of the value of nsimulation before adopting it," David Gaba continued..

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Department of Nurse Anesthesia, Adventist University of Health Sciences, USA

Correspondence: Steven J. Fowler, Department of Nurse Anesthesia, Adventist University of Health Sciences, USA, E-mail: Steve.Fowler@ahu.edu

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