ACS 2024 Surgeons and Engineers: A Dialogue on Surgical Simulation Meeting

P-E-02

Research Abstracts

Stakeholder Requirements for the Design of an Optimal Surgical Simulator

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Introduction: Simulation is an important adjunct to aid in the acquisition of surgical skills for trainees. The simulators used to adequately enable trainees to learn, practice and get assessed in surgical skills need to be of the highest standards. This study investigates the perceived requirements of both the surgical educator and the surgical trainee in the use of simulation and the design of surgical simulators. The optimal features of a simulator to teach any surgical skill is explored with an emphasis on acquiring skills in limb exploratory procedures in trauma.

Methods: Semi-structured interviews were conducted with an international group of 11 surgical educators and 11 surgical trainees who had experience with surgical simulation. The interviews focused on the perceptions of simulation, the integration of simulators within a curriculum and the features of a simulator itself. Interviews were recorded, transcribed and underwent thematic analysis.

Results: Analysis of the perspectives of surgical educators and surgical trainees on simulated training in general surgery and in limb trauma surgery yielded three main themes: 1. Attitudes to simulation. 2. Implementing simulation, 3. Features of an open skills simulator. The responses of the educators and the trainees were similar and reflected similar concerns and suggestions for improvement.

Conclusions: There is a clear positive appetite for the incorporation of simulation with increasing complexity into the training of surgery and limb trauma training. The findings of this will inform the optimal requirements for high-quality simulator design and also for its implementation into training for optimal effect.