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The important role of in-situ simulation in preparing surgeons for the COVID-19 pandemic



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ABSTRACT

Background: Effective training is vital when facing viral outbreaks such as the SARS Coronavirus 2 (SARS-CoV-2) outbreak of 2019. The objective of this study was to measure the impact of in-situ simulation on the confidence of the surgical teams of two hospitals in assessing and managing acutely unwell surgical patients who are high-risk or confirmed to have COVID-19.

Methods: This was a quasi-experimental study with a pretest-posttest design. The surgical teams at each hospital participated in multi-disciplinary simulation sessions to explore the assessment and management of a patient requiring emergency surgery who is high risk for COVID-19. The participants were surveyed before and after receiving simulation training to determine their level of confidence on a Visual Analog Scale (VAS) for the premise stated in each of the nine questions in the survey, which represented multiple aspects of the care of these patients.

Results: 27 participants responded the pre-simulation survey and 24 the one post-simulation. The level of confidence (VAS score) were statistically significantly higher for all nine questions after the simulation. Specific themes were identified for further training and changes in policy.

Conclusion: In-situ simulation is an effective training method. Its versatility allows it to be set up quickly as rapid-response training in the face of an imminent threat. In this study, it improved the preparedness of two surgical teams for the challenges of the COVID-19 pandemic.

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Introduction

The SARS Coronavirus 2 (SARS-CoV-2) outbreak of 2019 (and subsequent COVID-19 disease) rapidly became a pandemic and is potentially the greatest threat humanity has faced in modern times. Its impact is virtually incalculable. The worldwide economy grinded to a halt. Experiences in the most affected regions tell of entire healthcare systems overrun in a

matter of days, requiring disaster triaging of patients on a massive scale, particularly for access to Intensive Care.^{1–4}

As of August 2020, approximately 23 500 000 cases of COVID-19 and 812 000 deaths have been confirmed worldwide, with 333 000 and 41 500, respectively, occurring in the United Kingdom⁵; these are likely to be gross underestimates, and will be higher by the time of publication of this study. It is vital that lessons rapidly be learnt in regions where there is still the

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