Surgical simulation: evaluating prescribing under pressure

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Background:

Safe prescribing is a vital skill for newly qualified doctors. Teaching in Medical schools is often classroom based and is lacking the pressure of an on-call experience; when medication errors are most likely to occur. There is currently limited evidence regarding the effectiveness of teaching prescribing in high-pressure simulation sessions to prepare students for clinical practice. The aim of the study was to evaluate how stress affected students' confidence to safely prescribe medications in an acute surgical care online simulation.

Methods:

Following informed consent and ethical approval, final year Medical students from Newcastle University Medicine Malaysia (NUMed) were invited to participate in this study. An acute care online prescribing simulation adapted from face to face simulation was created for this study. During the stressful acute care simulation students were asked to take a history from a patient, make decisions on clinical management and prescribe correct medications. Students were graded by the same team of assessors on their ability to complete patient and hospital details correctly, evaluate allergies, select the correct medication, dose, route, frequency, review date and sign the prescription. Students were asked to rate their level of stress from 1-100 pre and post simulation and scores were on their prescribing accuracy.

Results:

35 students completed the simulation and could obtain a maximum of 10 marks for correct prescribing. Mean scores in this exercise were 8.02±0.29. with antibiotic review date being the most frequently missed feature of prescribing. Mean confidence levels for prescribing before simulation (54.1± 2.5) were lower than post simulation (69.6±2.6) which was statistically significant (p=0.041). There was no correlation between pre-and post-prescribing confidence and scores obtained for accurate prescribing.

Conclusions:

Online simulation can help improve medical student's confidence in accurate prescribing in stressful simulated acute care scenarios.

Keywords: *Simulation, prescribing*