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The Impact of Human Factors and Error Causation Simulation Training for Overseas Surgical Trainees

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Patient safety is the cornerstone of high quality surgical care, improving the efficacy of safety training is fundamental to advancing quality. This work utilises simulation training to produce lasting impact on the safety behaviours of surgeons. Our work previously illustrated that the use of information technology, via video demonstration does not produce a sustained improvement to safety practices. This research demonstrates the value of simulated surgical serious incidents and near misses on the prolonged safety practices of surgeons.

Method: Overseas postgraduate surgical trainees were observed and graded during their patient interactions and pre-operative checks. New surgical trainees then underwent an induction where actors simulated patient interactions. Previous serious incident and near miss reports were used to give realistic clinical situations where surgical errors could occur. Trainees worked through the simulated situations to see if these errors would be recognised during the pre-operative checks. The learning points were highlighted and six months after the educational intervention they were re-evaluated.

Results: Only one third of trainees confirmed the treatment plan with the patient pre-operatively, this rose to 100% after the simulation training. All of the trainees after the intervention ensured a surgical “time out” was performed, in line with the WHO surgical safety checks. In 93% of cases these safety checks were verbally confirmed to the rest of the team, this was three times higher than seen prior to the training.

Conclusion: This work illustrates simulation training can provide sustained improvements in safety behaviours in surgical trainees when compared to video and didactic teaching alone. The scenario based training with actors allowed new surgical team members to make errors in a safe environment and all reported it to be of high value. In future we aim to video the simulated scenarios to aid with feedback and training.

Biography:

Tamsin Cooper is currently an oral surgery registrar at the University Dental Hospital of Manchester, Manchester University NHS Foundation trust. She is passionate about teaching and has an active role in teaching both undergraduate and post graduate surgical trainees. Tamsin has a particular interest in advancing patient safety and implementing new training initiatives which have received national awards. This has included introducing human factors training and simulation scenarios to improve patient safety and peri-operative patient management.

Dr. Alka Saxena is a consultant oral surgeon at University Dental Hospital Manchester, where she leads in clinical effectiveness, patient safety, hospital sedation and cross Infection. She is the Training Programme Director for Dental Core Trainees in Health Education Northwest, examiner for RCS England and was transformation lead for Central Manchester Foundation Trust. She graduated in London, completed specialty training in Birmingham in 2007 and was president of the Birmingham Medical Institute, prior to taking up her current post in Manchester in 2008. She has led patient safety initiatives which have resulted in significant and sustained reduction in adverse surgical incidents and improved patient safety culture at University Dental Hospital Manchester with the organisation being shortlisted for the National Patient Safety Awards in 2014.