Transfer of skills of managing sepsis from a simulated lab to the clinical environment: a work in progress

Introduction:
In simulation based research in medicine, there is relative paucity of proof that simulation improves patient care. Most studies address knowledge gain but the ones that demonstrate transfer of skills acquired in the simulation lab to the real hospital environment and a subsequent improvement in patient outcomes are in clinical domains other than medicine. That stems from the difficulty of designing and executing a translational research type 2 or 3 within the medical field. Despite the existence of comprehensive, international guidance on the management of sepsis, compliance remains low.
A large scale educational intervention in Spain demonstrated significantly improved compliance with guidance...

Aims:
In our study we aim to demonstrate the transfer of skills acquired in simulation to the clinical setting in the management of sepsis on an acute medical ward. Sepsis was chosen as a condition for its high mortality and poor treatment rates.

Challenges:
Video recording of clinical practice is fraught with difficulties, especially in the demanding environment of an acute admissions unit. The arrival and triage of patients with sepsis is unpredictable, and presentation can take a variety of forms. Patients may be unfit to provide informed consent, and data use and storage are considerations. The environment requires a high degree of awareness of hazards and the potential for confidentiality breach, and interactions with other patients and staff. Assessing the actions of the target group of professionals in the context of a multidisciplinary area is challenging.

Methods:
Ethics approval was obtained. Fourteen junior doctors based on the acute assessment unit in our hospital were given an initial lecture on sepsis management, and were all individually video recorded treating a patient with sepsis. Consent was obtained from both doctors/nurses and patients. Trainees were then randomly allocated into two groups. One group received simulation training on sepsis management and the control group attended the a lecture on sepsis, based on the Sepsis 6 guidance. All fourteen participants were again video recorded treating patients with sepsis.

Conclusion:
We believe that our study is one of the first to capture real time transfer of skills from a simulation lab to a real hospital environment, especially in an acute medical assessment unit. We hope that our results will pave the way for further research in this area. We understand that the major limitation of the study is that it is unit-centred and small scale, but we tried to limit this problem by designing a sound research protocol and double blind the process, as the assessors of the subjects’ videos do not know which group the candidates belong to, and whether the capture was before or after intervention.

References: