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SIMULATION BASED LEARNING FOR CARDIAC RESIDENTS AND FELLOWS

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Medical simulations aim to imitate real patients, anatomic regions, clinical tasks, virtual reality devices and electronic manikins or to mirror real-life situations in which medical services are rendered. Simulation – based learning (SBL) applies these modalities. Benefits of medical simulation includes safe environment, mistake forgiving, trainee focused vs. patient focused, controlled, structured, proactive clinical exposure, reproducible, standardized, debriefing, deliberate and repetitive practice. Medical simulation can assess professional competence as patient care, medical knowledge, practice-based learning & improvement, communication skills, professionalism and systems-based practice. Patient safety priorities are at the forefront of health providers' concerns.

The see one, do one, teach one philosophy certainly should be eliminated. This is best summarized by "simulators have the potential to take the early and dangerous part of the learning curve away from patients". Simulation has rapidly evolved as a learning tool and technology over the past 15 years, and has been shown to be an effective method for teaching. Despite this, the field of cardiovascular medicine is still in the primitive stages of adopting simulation. The reasons cited for this include: the high cost of simulators, a dearth of didactic curricula to accompany the psychomotor skill learned on a simulation, the wide variability and/or lack of consistency that exists among the simulation platforms, and a complete absence of large trials showing that this expensive technology actually improves operators' skill in the angiography suite and presumably enhances patient outcomes. Despite all this, the ACGME now mandates that cardiovascular fellowship training programs must have simulation as part of fellow training. Cardiac simulation training ranges from as simple as training on listening to normal and abnormal heart sounds, differentiating different types of heart murmurs, interpreting ECG findings, utilizing high fidelity manikins for different cardiac scenarios such as heart failure and cardiogenic shock apply team work as crew resource management, practicing transthoracic echocardiogram plus transoesophegeal echo (TEE), cardiac catheterization and central line insertion up to different cardiac interventional procedures.

On 2016, we conducted a survey for pediatric and adult cardiac residents whom had attended different cardiac simulation courses at CRESENT, KFMC. We received 130 responders. 100% of the candidates found these courses are enjoyable, safe, not stressful and very useful training methods, 98% enjoyed it mostly because it is repetitive and mistakes are forgiven with zero hazards to patients.100% feels video debriefment following cardiac medical scenarios is very helpful as it clarify areas for improvement much better than conventional training. In conclusion, although cardiac Simulation courses is expensive but it plays important role in patient safety so at the end it is cost effective so would encourage to make it mandatory in the curriculum for cardiac residents and fellows.

Biography

Sawsan Al Yousef is an assistant professor at King Saud Bin Abdulaziz University. Currently he is appointed as consultant pediatric Intensive Care and Pulmonary at King Fahad Medical City(KFMC) and also a chairperson of post graduate simulation Department at Center for research , Education, Simulation enhance training (CRESENT)KFMC, at the same time he is a Director of Saudi Commissioner for Health specialty for PICU Fellowship Examination Committee, Saudi Arabia.

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