

# WORLD HEART RHYTHM CONFERENCE

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## Medical simulation training and heart rhythm identification

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Simulation is a technique to replace or amplify real experiences in an interactive setting. Simulation – based learning (SBL) applies this, through the use of role play, simulated patients, part-task trainers, virtual reality devices and electronic manikins. Patient safety priorities are at the forefront of health providers' concerns and this has driven a more consultant-led service. The see one, do one, teach one philosophy has hopefully been, and certainly should be, eliminated. SBL can take place without exposing patients to risk, at the speed of the learner, with immediate feedback and the ability to adapt to the learner in a completely flexible way. Perhaps this is best summarized by saying that simulators have the potential to take the early and dangerous part of the learning curve away from patients. 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. 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 transoesophageal echo (TEE), cardiac catheterization and central line insertion up to different cardiac interventional procedures. On June 2017- May 2018, we conducted once per month a one day simulation cardiac course for pediatric residents whom had attended different simulation courses at CRESENT, KFMC. All candidates went through pre course knowledge and clinical skills evaluation followed by the end of the day with post course knowledge and clinical skills evaluation similar to the pre course. 125 candidates were involved, 100% of the candidates had significant improvement in their knowledge and skills at post course test compared to pre course and non had declined in their scores beside 100% of them found these courses are enjoyable, safe, not stressful and very useful training methods, 97% 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, MD, CABP, FCCP, Assistant Professor king Saud Bin Abdulaziz University and Health Science, Clinical and Research Pediatric Critical Care fellowship from University of Western Ontario, Canada, 2001, Clinical Pediatric Respiratory, University of Toronto, Canada, Arab and Saudi Board of Pediatrics, 1997. Currently Appointed as Consultant Pediatric Intensive Care and Pulmonary at King Fahad Medical City (KFMC), Chairperson of Post Graduate Simulation Department at Center for research, Education, Simulation enhance training (CRESENT) KFMC, Director of Saudi Commissioner for Health specialty for PICU Fellowship Examination committee, Saudi Arabia.

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