Man vs. Machine: A comparison of assessment of chest compressions by trained assessors compared with mannequin recording—How research can inform practice?

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The delivery of effective chest compressions is the single most important factor in positive patient outcomes following cardiac arrest. Recent changes to Australian, American and European Resuscitation Council guidelines reinforce the need to deliver quality, uninterrupted chest compressions. Currently, all clinical staff in a major Australian private hospital is required to gain annual accreditation in basic life support (BLS). Previously, selected clinical staff was trained to assess their peers in BLS performance; however there was a lack of evidence to support whether these assessors could accurately grade the quality of chest compressions. Therefore, this study was conducted to compare assessor scores of chest compression performance with those generated by a mannequin. This study identified that trained BLS assessors are not able to accurately assess poor quality and competency in performing chest compressions. This study reinforced the use of innovative technology to improve the assessment of chest compressions with the hope to improve patient outcomes following cardiac arrest. Based upon the findings from this study, the BLS assessment method within the organization has been reviewed and changed. The new program utilizes resuscitation mannequins to provide low dose, high frequency training that provides real-time, objective feedback and negates the need to train BLS assessors or remove staff from the clinical area. This study has resulted in the development of a BLS assessment program that is both cost effective and sustainable. More importantly, the new program has an improved reliability in detecting poor chest compression competence amongst staff, provides objective assessment and feedback on performance and can ultimately have a positive impact on patient survival from cardiac arrest.

Biography

Amanda Peat is currently working as the Advanced Care Educator and Simulation Educator at Cabrini Hospital in Melbourne, Australia. Within her role, she is responsible for the development and delivery of the cardiovascular curriculum at her organization. She has completed a Post-graduate degree in Intensive Care Nursing and is currently completing her Master of Health Professional Education. Her research in the field of Basic Life Support has been presented internationally and the systems changes, informed by her research findings, have been adopted by multiple centers within Australia.

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