The BIG Shock – AED Trial for Non-Experienced Responders

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INTRODUCTION

In the spring of 2004 University of Pittsburgh Medical Center (UPMC) Health System committed to placing AEDs at over 200 of its facilities including physician offices, physical therapy sites, business and corporate offices. The committee needed to decide which AED would best meet the needs of all sites. An expert panel was formed to establish the required characteristics needed for the AED. The panel then needed to evaluate whether the potential AEDs met the require characteristics.

Setting: UPMC, Peter M. Winter Institute for Simulation Education and Research (WISER). Each training room contained one full scale simulator, Laerdal SimMan, a patient bed, audio and video capabilities.

ABSTRACT

AED Trial Evaluation Tool (ATET)

METHODS

Facilitators oriented participants to the environment and gave basic information that the victim was unconscious and needed the AED. They were then given a randomly chosen AED. Record of time began at the point the participant was given the AED. Primary endpoint was time to defibrillation. Trained observers (3) utilized an 8-point AED Trial Evaluation Tool (ATET) constructed by the evaluation committee to record participant performance.

RESULTS

CONCLUSION

1. It is possible to utilize full scale human simulation to assess AED skills of untrained subjects.
2. It is also possible to access the functionality of clinical equipment needed by a facility using full scale simulation.
3. There appears to be a large variation in defibrillation times and user preferences in spite of the similarity of the devices.
4. By coupling time to defibrillation with user preferences, we were able to construct an efficiency rating, a learning curve, and a composite score for performance and preferences of users.
5. This simulation methodology was extremely useful in assisting UPMC to purchase the “right” equipment for our facility. A similar methodology may be useful elsewhere.
6. Future studies should focus on what factors contribute to the variability in efficiency and user preference.

REFERENCES
