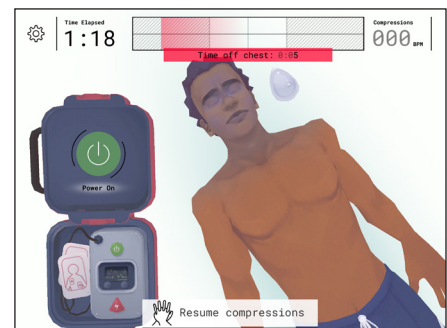
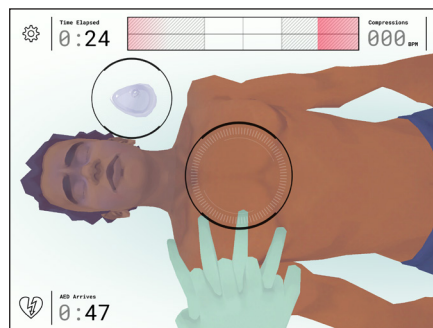
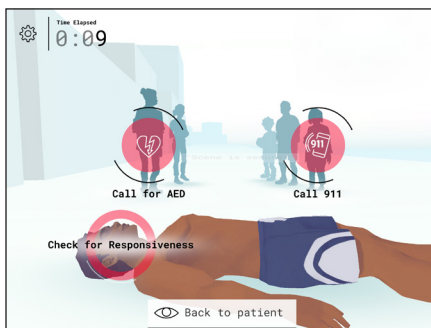




Saving Lives!:

A game-based mobile application to promote CPR training and competency.

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Cardiopulmonary Resuscitation (CPR) is a life saving skill and the foundation of basic life support (BLS), (Madden, 2005). The skill must be mastered by a broad range of healthcare providers and first responders including police, firefighters, lifeguards, coaches, EMT's, nurses and physicians. Of the skills tested during CPR/BLS training, effective chest compressions are considered one of the most important factors in achieving the return of spontaneous circulation. That being said, learners often achieve low scores in BLS chest compression skill demonstration (Ewy, 2007; Kellum, Kennedy, and Ewy, 2006). Although CPR/BLS recognition is a mandatory job requirement for many of these professions, regular deliberate practice is rarely performed, and CPR competency is poorly retained (Handley and Handley, 2003).

As alternative strategies including digital and game-based instruction have become more prevalent, novel and accessible ways to promote initial training and skill retention should be explored. Digital and game-based learning tools create a learner-oriented approach while promoting curriculum outcomes. In addition game-based learning may be ideal for continuing health professions education because it can provide a cost effective tool that promotes anytime and anywhere learning (Bauman, 2016; Ricciardi & Paolis, 2014). A review of the available digital mobile applications and games yielded a paucity of computer based games available to support for BLS education that were consistent with current

American Heart Association (AHA) guidelines for proper rate of chest compression, depth of compression and recoil. Saving Lives! is a tablet-based application that provides learners with just-in-time feedback in an authentic situated game where the patient status changes based on player performance associated with best practices in CPR. By providing on demand practice, learners are able practice BLS/CPR skills more frequently than through the use of traditional mannikin-based continuing education. This sort of access to formative and summative feedback through game-based learning may improve key competencies related to best practices in CPR.

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