MobileCARE- Innovative Approaches for Combat Trauma Education and Documentation

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Abstract

Learning Objectives:

1) Participants will identify the successes and challenges of developing and implementing a total mobile data management system in a level 1 trauma center.
2) Participants will demonstrate the value of integrated solutions combining mobile devices, electronic medical records, education and telemedicine/decision-support for when decisions are most critical.
3) Participants will appreciate the importance of the user experience and acceptance when selecting appropriate technology for their mobile health projects

Mobile technologies harbor the potential to transform healthcare by improving clinician workflow and decision-making, which ultimately enhances quality of care and patient outcomes. The time sensitive nature inherent in trauma and critical care requires physicians to quickly access information to make correct decisions. In the past 5 years, we have been developing a mobile software platform and data management system that combines clinical documentation, education and telemedicine/decision-support. The goal is to provide clinicians with an integrated system of tools to facilitate the process of care. *MobileCARE* delivers a suite of integrated applications that completely supports a physician's workflow. Clinicians are able to create documentation, view test results, medical notes and surgical documentation in real time. It also provides access to a mobile learning trauma and critical care curriculum and the ability to communicate through telemedicine with other team members. To better understand the use of mobile technologies in the clinical environment, we conduct usability and user acceptance testing as a guide to implementation. We also have conducted knowledge and skill acquisitions tests of the learning modules.The system are currently being evaluated in the trauma intensive care unit of a busy urban Level 1 trauma center. Physicians use it to document patient admissions and daily patient status with the information immediately available to all users across multiple platforms. Knowledge and skill acquisition tests have demonstrated that the mobile learning modules are equivalent to traditional classroom lectures (Figure 1), and that their use improved performance in the simulated environment (Figure 2). *MobileCare* is a complete software solution that provides significant functionality in the clinical environment. The impact on the safe and efficient delivery of care will continue to be realized. This technology is especially beneficial where continuity of care is required, as with patients with chronic disease or multiple acute conditions.
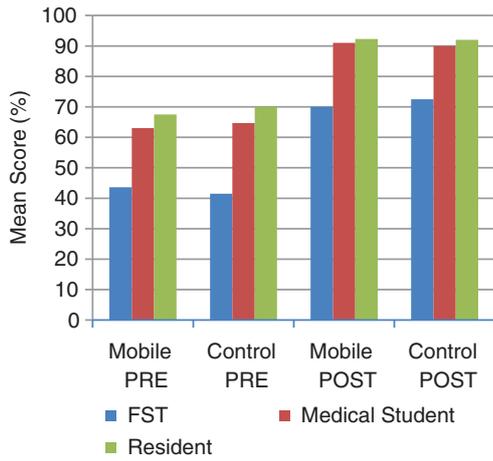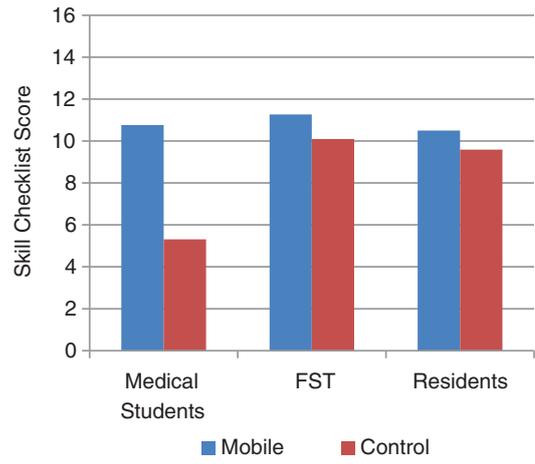
Figure 1

Figure 2