Utilization of Apple iPads in Student Clinical Rotations to Improve Safety and Streamline Information Access

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ABSTRACT

American Society for Microbiology Guidelines for Biosafety in Teaching Laboratories (2012) state that educators must use best practices to minimize risk of biohazard contamination to students. Integrating mobile digital devices into medical laboratory science (MLS) programs' clinical training is potentially one means of reducing this risk. The purpose of this pilot project was to ascertain attitudes from students and clinical educators on using mobile devices as a laboratory benchside educational tool during clinical rotations as a novel alternative to paper materials. In this study, 3 senior-level MLS students used Apple iPads in concert with Google Drive in lieu of paper manuals during Hematology and Transfusion Medicine clinical rotations at Virginia Commonwealth University Health (VCUH). Two VCUH clinical educators from these laboratories also participated. All participants were trained on usage and access of electronic material on the iPads as well as proper cleaning of the devices. Prestudy surveys were used to assess attitudes toward mobile devices. Focus groups, for students and clinical educators, separately, were conducted after completion of the clinical rotations. The results of the study indicate that advantages of employing mobile devices include improvement of safety by eliminating transfer of paper worksheets from laboratory to the outside, ability to electronically monitor students' progress through clinical laboratory rotations, and ease of accessibility to electronic references at the benchside. Information gained from this pilot study implies that mobile devices can be used to decrease contamination risk while serving as a state-of-the-art educational tool on the laboratory benchside. Potential applications of mobile devices within the clinical laboratory include: (1) recording and tracking instrument maintenance, (2) tracking personnel training and competences, and (3) tracking reagent inventory.

ABBREVIATIONS: MLS - medical laboratory science, VCUH - Virginia Commonwealth University Health.

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