Simulation Committee Meeting
September 3, 2015

Attendees:
David Biffar, MS, ASTEC
Lisa Grisham, MS, NP, ASTEC
Kwan Lee, MD, FACC
Vivienne Ng, MD, MPH
David Nathalang, DO
Steven Barker, PhD, MD
David Biffar explained the above breakdown in utilization between the four main user groups based on Learner Contact Hours. He noted that the medical students had slightly increased and residents had slightly decreased for 2014-15.

Dr. Hamilton is in the process of forming a medical student simulation interest group that will provide feedback to ASTEC on medical simulation topics that they feel are most beneficial to preparing them for their post graduate years.
ASTEC had another successful year providing simulation training for the CoM Transition Block. All Year III students were able to experience the full lumbar puncture procedure. During this event ASTEC had also randomized a small group of students to experience a formal assessment of their performance. We also had a small group of students interact in a virtual experience as part of an orientation to the LP procedure. Overall, students were interested in the opportunity to have their skills assessed during simulation encounters, especially when it used as a measure of improvement over time. The virtual reality experience did not have any significant effect on student performance on a task trainer but future studies would need to include a larger sample size and/or more experienced learners.
Currently ASTEC is developing a completely mobile suture evaluator to be used with all four years of medical school and PGY 1 and 2 Residents. The device provides you with objective feedback on performance and can be used with any of ASTEC’s customized suture pads. It can fit easily in to a white coat pocket and works with WiFi so it does not need to be plugged in to a laptop. Plans to begin beta testing are set for the beginning of November.
ASTEC staff, including a BME undergraduate intern, worked with Dr. Ng from emergency medicine to develop an ultrasound combatable pericardiocentesis trainer that was used as part of a patient scenario simulation during the emergency medicine quarterly sim conference. Future direction will be to develop a more realistic heart model and conduct a comparison study with actual patient scans.

Dr. Lee mentioned that there may be an opportunity to begin training cardiology fellows in the ASTEC lab and the pericardiocentesis trainer would be one of several trainers that ASTEC could provide.
ASTEC was included on a recent publication with the Emergency Medicine Department on work that was conducted to develop a low cost ultrasound phantom that can be used for needle insertion procedures. ASTEC has recently conducted extensive work on testing different material configurations to identify a recipe that provides the most realistic ultrasound image. Work continues with gelatins, polyurethanes, and silicones and various additives to create a more realistic ultrasound experience.
ASTEC will be hosting a senior design project for a group of undergraduates from the College of Engineering. Work will continue on developing a 3D printer that will be able to print soft tissues.
ASTEC was recently awarded a grant from the IT Student Advisory Board that has allowed us to purchase a 3D printer with all accompanying software and supplies. This will immediately take ASTEC to a new level with our in-house operation for customizing procedural task trainers for medical simulation training.
ASTEC continues to work with the College of Optics for testing a foveated endoscope for use with laparoscopic surgery. ASTEC was awarded separate space in the College of Medicine where the scope will be tested. A study will begin by 2016 that will include both medical students and residents.
Funding was secured by the College of Medicine to purchase two new adult patient simulators because two of our existing simulators will now be obsolete by the end of 2015. One of the two simulators will be the Laerdal 3G wireless high fidelity patient simulator. ASTEC has never owned a patient simulator at this level of sophistication. This mannequin can also be upgraded with replaceable skins that are compatible with an ultrasound machine.
The other simulator that was purchased is a state-of-the-art birthing simulator. This mannequin also doubles as an adult female patient simulator and it is the only simulator on the market that is completely combatable with a patient ventilator.
Next Simulation Committee Meeting

November 19 at 1:00 PM

ASTEC Room 2115

Other discussion