General Information

Simulation can be used in task or situational training areas in order to allow students to anticipate certain situations and be able to react properly; decision-making environments to test and select alternatives based on some criteria; scientific research contexts to analyze and interpret data.

> *These advantages are particularly clear in simulation technologies and can also exist with computer based models of real-life processes. Exploration in a realistic environment provides multiple benefits to learners: opportunities to practice rare and critical events, safe and controlled environments that eliminate risk to patients, enhanced visualization, and authentic contexts for both learning and assessment. In these environments, assessment of learner behavior and outcomes can be documented* (AAMC, 2007).

General Strengths & Weaknesses

UMMS users report *relative realism* for the benefit of training as the primary *strength* of simulation technology, specifically citing consistency of comparative presentation (SPs, VM), and the opportunity to learn without "*risk to real patients*". Other strengths include the inherent opportunity for "*coaching teamwork*" [skills], discussion, and the saliency of the experience for the students.

Weaknesses are reported in four general categories: 1) variety or diversity of "patients" (SPs, mannequins); 2) quality and age of models (SPs, mannequins, VM); 3) cost in terms of time, money, and space; and 4) limited flexibility with regard to research generation and comprehensive skills demonstration. UMMS user comments included as weaknesses cluster around difficulties with model believability on the part of students who struggle to "*...suspend reality long enough to pretend this is a real patient*"; that older computer equipment does not handle the large digital models (VM, B-line); and the predictable diminished effectiveness that occurs as a result of "*…over-familiarity with a cohort of SPs diluting the poser of interaction with a new case (played by an old actor).*"

Types of Simulation Tools Included in this *e*Portfolio

- B-Line
- Harvey Cardiac-Pulmonary Simulator
- Noelle with Newborn Hal
- Online Cases
- SimMan
- Skills Trainers
- Standardized Patients
- Virtual Microscopy
- Varian Radiation Oncology Medical System

LInC Technology Survey

Purpose Statement
Results

Contact UMMS HelpDesk or the Simulation Center with specific questions about particular simulation tools.
Contact Colleen Burnham with general questions about the use of simulation tools.

References

AAMC Institute for Improving Medical Education. (2007, March). *Effective use of educational technology in medical education: Colloquium on educational technology: Recommendations and guidelines for medical educators.* Retrieved January 19, 2010, from AAMC: http://services.aamc.org/publications/showfile.cfm?file=version80.pdf&prd_id=184&prv_id=224&pdf_id=80