

## **Design Teams for Simulation Centers Require Medical Audiovisual Technology Consultant**

### *Overview*

Today's medical simulation centers, both academic and military, require multifunctional architectural spaces with flexible audiovisual technology systems. Qualified, experienced design consultants in this field understand medical services as well as clinical work flows, and as a result can create extremely realistic environments.

Continuum-of-care scenarios and trauma location simulations, for instance, have become commonplace. They used to live only in the rarefied air of elite academic institutions and medical research centers. High-fidelity mannequins present more realistic human physiology and anatomy. These are invaluable features of simulation's promise in education, but it becomes that much more essential that audiovisual systems integrate tightly with these advanced medical simulation technologies.

### *Identifying the Problem: Generalists in a Specialist's World*

Generalist audiovisual design consultants enter the healthcare simulation market every year. It has been one of the few technology markets that continues to grow annually. It's not difficult to see the attraction. Medical simulation has become, in relative terms, a cost-effective tool in reducing the prohibitively high price of providing medical education. The problem is that simulation center design is a specialized field. It requires a 360 degree understanding of healthcare systems, work flow, FDA, JCAHO and AHIMA regulation, as well as specific medical and nursing school educational objectives.

A general audiovisual design consultant typically does not have the expertise or medical knowledge prerequisites for medical simulation systems design. There are no training programs per se. Too much time is spent learning on the job, which proves potentially unpleasant and unnecessarily costly for the client and simulation center staff. Many audiovisual designers new to the medical field overlook details and create overly complicated systems that never get used properly, and clearly do not meet a facility's needs. Additional support and problem solving to try and optimize poorly designed systems leads to lost time, blown budgets, and client frustration.

Technology plays a central role in any healthcare simulation environment. Imaging, telemetry, patient monitoring, video streaming, video recording and playback—all of these components need to reflect real-world experiences. Students must to be able to work as if they are in an actual hospital or clinical environment, or risk losing the vast educational benefits of medical simulation.

### *Solution and Conclusion*

Federal and state initiatives, as well as overall market objectives, impel reduced costs and continuous improvements in healthcare education. Designers in the medical field, therefore, must have the foresight to anticipate what technologies will evolve and how that evolution will affect the medical simulation industry as well as the structure surrounding the simulation center. Ensuring that a qualified medical audiovisual technology designer is selected to be part of a simulation center design team is vital to achieving the project goals in technology. Breadth and depth of experience in real-world clinical systems audiovisual design is the greatest predictor of value and utility for successful medical simulation centers.