

Advancing the future of medicine through education and innovation

By Stuart Hart, M.D.

Florida has one of the country's largest medical device manufacturing industries, ranking second in the nation in the number of FDA-registered medical device establishments. The Tampa Bay area leads the state in producing and acquiring medical patents.

USF Health's Center for Advanced Medical Learning and Simulation (CAMLS), through its commitment to transform health care through innovation, collaboration and technology, will be a major force in furthering Florida's reputation as a medical technology leader. This 90,000 square-foot facility, located in downtown Tampa, integrates three floors of innovative simulation experience with education and research excellence to put the latest advances in health care into practice.

CAMLS will define standards for competent practice and expert performance, and will serve as a guidepost for lifelong learning. Learners at CAMLS will include health professionals (medicine, nursing, pharmacy, public health, pre-hospital, allied health) across the continuum of education (undergraduate, graduate, and practicing), as well as military healthcare professionals, medical specialty societies, industry representatives and researchers.

CAMLS comprises four core components: Surgical and Interventional Training Center, Education Center, Virtual Patient Care Center and Tampa Bay Research and Innovation Center.

The *Surgical and Interventional Training Center* is where surgeons and residents can simulate and practice procedures using state-of-the-art technologies. Its three Surgical Skill Labs include 39 work stations, all fully boomed with complete anesthetic and operating capabilities for all specialties. It also features a robotics suite, trauma operating room and a hybrid operating room that combines interventional with open surgical procedures and the ability to change conditions in sight, sound and temperature to simulate different operating environments.

The *Education Center* promotes education through interactive conferencing capabilities, with a 200-person tiered auditorium for satellite video-conferencing, Wi-Fi and recording capabilities. Other facilities include classrooms, dining space and catering kitchen, exhibit space and a Cisco TelePresence high resolution conference room. Facilities are available for rental by community groups as well as being used by CAMLS and University of South Florida.

In the *Virtual Patient Care Center*, health professionals can improve their clinical skills in a risk-free environment that has been accredited by The Society for Simulation in Healthcare. Facilities include patient exam rooms, team training and debriefing rooms, virtual outpatient and inpatient pharmacies, surgical simulators, audiovisual recording of simulated exercises and human patient, combat casualty and birthing simulators.

In addition to surgical simulation, education and virtual patient care, CAMLS is home to *Tampa Bay Research and Innovation Center* (TBRIC). This collaborative space brings together medical faculty, engineers, computer scientists, management experts and industry partners to address important challenges. This includes a medical device accelerator program, health technology

assessment services, modeling and simulation to generate advanced anatomical and analytical models, medical systems engineering, human factor analysis of medical technologies and innovative medical and surgical curriculum design.

TBRIC is partnering with Tampa Bay Innovation Center to assist in providing a cost-effective way to develop and commercialize these efforts. Tampa Bay Innovation Center will offer business mentoring and coaching, networking opportunities and additional resources to TBRIC spinoff companies, working with them as both virtual incubator clients and incubator onsite at Tampa Bay Innovation Center. CAMLS looks forward to the partnership with Tampa Bay Innovation Center as part of its commitment to improved healthcare delivery.

Stuart Hart, M.D. is the medical director of the Tampa Bay Research and Innovation Center. He is also an assistant professor of Obstetrics and Gynecology, in the Division of Female Pelvic Medicine and Reconstructive Surgery, at the University of South Florida. He can be reached at shart1@health.usf.edu. Dr. Hart spoke at a recent TECH Talk program presented by the Innovation Center's Entrepreneurs' Hub.