

Endovascular Medical Simulation

The development of medical simulation technologies offers the potential to revolutionize the education of procedurally oriented physicians at all levels of medicine, including medical students, interns, residents, fellows, and experienced operators. Although significant advances have been made in the past several years, the full potential remains to be realized. Nevertheless, there has been an immediate impact in the training of skilled practitioners.

This issue of *Endovascular Today* delves into the opportunities and advancements enabled by medical simulation. John D. Carroll, MD, describes the growth of medical simulation, from its origins in the US Army Air Corps, to its implementation as a teaching tool at trusted medical centers, a move supported by medical societies such as the ACC, SCAI, VIVA, and SIR. Herbert D. Aronow, MD, discusses the use of simulators to shorten procedure times in carotid stenting procedures. He acknowledges that studies have demonstrated shorter procedure times for CAS after simulator training, but asserts that there is a need for studies to compare simulator competence scores with real-life clinical outcomes. Sheldon Goldberg, MD, et al, encourage wide use of medical simulation as a training tool, outlining eight procedures where simulation proves integral. Their center, the Interventional Cardiovascular Training Center in



Philadelphia, unites medical simulation with two other educational styles—live case demonstrations and focused case-scenario reviews—to provide minimally invasive therapies for the cardiovascular anatomy. William Gray, MD, explains the current use of patient-specific anatomy in medical simulations, and looks at how patient-specific simulators will provide invaluable information for surgical training and accreditation. I discuss the areas in which medical simulators fall short and the challenge of overcoming the capital cost of implementing simulator training.

The Case Report by Larry Horesh, MD, also advocates a minimally invasive approach to managing long-segment chronic total occlusions, and suggests that endovascular therapy is a viable replacement for surgical revascularization in CLI management. Dorothy B.

Abel explains who is responsible for ensuring that clinical studies are safely conducted and without bias. This issue closes with an interview with David E. Allie, MD, renowned cardiothoracic surgeon, who discusses the emerging CLI epidemic, the importance of revascularization over amputation for this population, and the challenge of moving New Cardiovascular Horizons from New Orleans to Miami.

I hope that you find this issue of *Endovascular Today* to be a helpful and insightful addition to your practice of endovascular medicine. ■

A handwritten signature in black ink that reads "Barry T. Katzen MD". The signature is fluid and cursive, with a stylized "B" and "K".

Barry T. Katzen, MD
Chief Medical Editor