

FROM THE DEAN

For decades, the airline industry has used simulation to train and assess the skills of pilots. Beginning in the early 1900s with contraptions crafted, for example, from two half-sections of a barrel to represent an aircraft's pitch and roll, simulator flight training has advanced to sophisticated digital environments that are highly realistic. Simulations — of staged as well as real disasters, such as the unforgettable crash of United Airlines flight 232 at Sioux City, Iowa, in 1989 — allow for complete and repeated analysis of what went wrong, what could have been done differently, and how more lives could have been saved. These training procedures result in greater safety for passengers and crew alike.

Medicine now too has embraced simulation for training and assessment. We are in an era when trainees will be taught and will practice to a level of competency before ever encountering an actual patient. Our cover story takes us into the Clinical Simulation Lab, where scripted scenarios allow medical students and residents to practice their skills — repeatedly, and with no risk to patients — on lifelike mannequins with bodily functions and symptoms of injury and disease that are uncannily realistic. Videotapes of training sessions provide an opportunity for students and instructors to analyze, discuss and determine ways to improve future performance. Virtual trainers for endoscopy, laparoscopy, and endovascular procedures provide additional opportunities to learn and refine skills.

Clinical simulation provides a powerful tool for learning medicine and represents both the present and future of medical education. Today's students not only have a familiarity with technology, they have expectations of it. Its value and potential hold huge implications for medical education by creating flexible learning opportunities and a high level of skills assessment.

Aviation and medicine are quite different fields, yet they share a similar bottom-line when it comes to training the professionals who work within each: to keep people safe, and to be prepared to respond as unexpected events and emergencies arise. Technology offers amazing ways to accomplish these goals, and it's revolutionizing how students learn and practice medicine. We'll explore the larger role of technology in medical education further in our next issue. Clinical simulation is just the beginning.

Sincerely,



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Photo: Martin Voet

