Medical Simulation Corporation

Simantics—
Defining the language of simulation

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From L to R: Bill Younkes, CEO, MSC; Alexander Haig.

MSC Appears on Health Journal Television

On April 16, 2006, Medical Simulation Corporation appeared on *Health Journal Television* hosted by General Alexander Haig.

Healthcare professionals must continually hone their knowledge and skills on new instruments and procedures to assure patient quality of care. In this segment of *Health Journal Television*, MSC discussed a training program that gets right to the 'Heart' of medical education. The SimSuite and its users were also featured on location at UC Davis in Sacramento, CA.

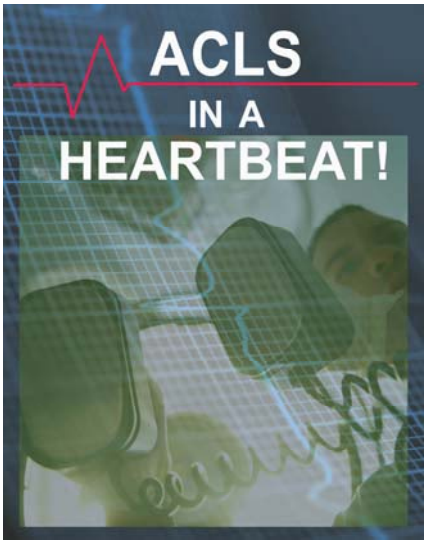
William Younkes, president and CEO of MSC explained, "The SimSuite System provides education and training for learning new medical procedures as well as new devices in a risk free environment. It is a highly effective tool used by medical societies, hospital administrators, and clinicians to stay focused on establishing best practices as a standard. This is achieved through high-quality programs that emphasize patient safety and clinician proficiency."

Coordinating producer Dawn Sorokin added, "When researching the latest developments in risk management, Medical Simulation Corporation consistently came up as being in touch with the most current advancements in this area. They were a natural to appear on this edition of *Health Journal Television*."

This segment can be viewed in the near future on United Airlines international in-flight TV or through video on demand at www.healthjournaltv.com.

Adverse cardiac events are a common and serious complication among hospitalized patients. A minimum of 370,000 patients suffer a cardiac arrest, followed by an attempted, but only sometimes successful, resuscitation (Mengert, T., 2006). Cardiac arrest or shock occurs in 0.6% of medical patients and 0.5% of surgical patients (Needleman, et al. 2002). One strategy for hospitals to improve the success rate of cardiac arrest resuscitation is to ensure that their healthcare teams are competent and confident in cardiac arrest protocols.

Advanced Cardiac Life Support (ACLS) is mandated at many institutions for staff working in acute patient care areas. The traditional approach for obtaining recertification typically involves an eight-hour course. This can be costly to hospitals that incur substantial expenditures in replacement staff. MSC has developed an easy and efficient alternative method for healthcare providers to renew their ACLS certification. The SimSuite program incorporates all of the elements required by the American Heart Association. Students can complete the classroom lecture components online, anywhere, at their convenience, and at their own pace. In addition, students have the ability to review the materials until they feel comfortable. A pretest is provided to allow students to bypass the required classroom content and go straight to completion of the skills checkoff. If a passing score is not obtained on the pretest, the student has the opportunity to review ECG rhythm strips, cardiac pharmacology, and ACLS algorithms. Ten



online scenarios are also provided: Respiratory Compromise; Ventricular Fibrillation: CPR/AED; Respiratory Compromise; Ventricular Fibrillation/Pulseless Ventricular Tachycardia; Pulseless Electrical Activity (PEA); Asystole; Acute Coronary Syndromes (ACS): Patients with Acute Ischemic Chest Pain; Bradycardias; Unstable Tachycardia; Stable Tachycardia; and Acute Ischemic Stroke. The student may then schedule time at their local SimSuite Center to complete the final exam. After obtaining a passing score, the student must demonstrate airway management, automated electrical

ACLS, page 3

Inside this issue:

Course Highlight: Septic Shock

Septic shock is a serious, abnormal condition that occurs when an overwhelming infection leads to low blood pressure and low blood flow. Vital organs, such as the brain, heart, kidneys, and liver, may not function properly or may fail.

A study conducted by the National Center for Health Statistics looked at a massive database that included 500 hospitals from around the U.S. and identified more than 10 million patients who were diagnosed with sepsis. This accounted for 1.3% of all hospitalizations. In large studies, the mortality rate of severe sepsis has been quoted anywhere from 30-50%.

MSC has developed a course for healthcare providers to gain a better understanding of septic shock and management of the disease process. This course is designed to provide the participant with improved assessment skills of patients with septic shock, including:

- Didactic review of disease process
- Interpretation of history, social history, and symptoms
- Review and recognition of pharmacology
- Formulation of diagnosis

A working knowledge of practice with many of the cognitive and technical skills of caring for the patient with septic shock symptoms:

- General patient care issues including sedation and analgesia
- Recognition and management of potential complications when caring for patients with complex disease processes

A working knowledge and practice in the cognitive aspects of post-simulation care of the septic shock patient:

- Understand the importance of supportive therapies such as nutrition and skin care

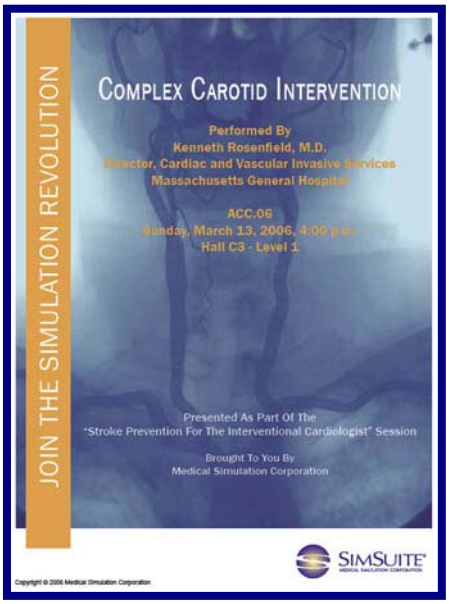
CME credits are available.

ACC.06 – Innovation in Intervention: i2 Summit 2006

The MSC SimSuite System made a special appearance at the *Innovation in Intervention: i2 Summit 2006*, which took place concurrently with ACC.06 in Atlanta, GA, on March 11-14. The system was featured on stage for a **live** case demonstration of a carotid artery stenting procedure performed by Dr. Kenneth Rosenfield, Director, Cardiac and Vascular Invasive Services, Massachusetts General Hospital. This simulated procedure was presented as part of the "Stroke Prevention for the Interventional Cardiologist" session. The objectives of the session included: 1) understanding the indications and techniques for carotid revascularization; 2) understanding optimal pharmacotherapy for carotid revascularization; 3) understanding case selection and the outcome of the carotid stenting; and 4) understanding the use of acute intervention for evolving stroke management.

The patient presented was an 80-year old gentleman who underwent a carotid endarterectomy (CEA) surgical procedure three years ago for a symptomatic right internal carotid artery (RICA) stenosis, or blockage. At a two-year follow-up, diagnostic studies indicated an increase in the severity of the blockage. A recent repeat carotid duplex suggested a rapid progression of the lesion to greater than 90% stenosis, significant enough to impair blood flow to the brain. Additional studies, such as a cerebral angiogram, confirmed a 95% restenosis with moderate calcification at the previous surgical site. Other significant patient history includes a right kidney transplant 10 years ago, chronic cyclosporine therapy, hypertension, and prior smoker.

Dr. Rosenfield stressed the importance of team training and preparation prior to performing a carotid artery stent procedure. Three team members assisted Dr. Rosenfield, including two registered nurses and one radiology technologist. Key procedural aspects were emphasized, including appropriate equipment choices, camera angles for viewing the stenosis, techniques for crossing the lesion, and management of adverse events. During the procedure, the patient developed signs and symptoms of an acute stroke, including loss of movement in the arm followed by unconsciousness. Upon visualization of the cerebral anatomy, it was noted that the middle cerebral artery was occluded. Dr. Rosenfield's team had to react quickly. They completed the carotid stenting and quickly removed the equipment from the patient. Dr. Rosenfield and his team inserted a small wire into the cerebral anatomy in order to mechanically "break apart" the occlusion. They then administered medications at the site of the occlusion to thin the blood. The team was successful in treating the acute stroke and the patient regained consciousness.



Good communication, knowing what to anticipate, what equipment to choose, which medications to administer, and how to manage adverse events prepares your team for the unexpected, and ultimately improves the quality of patient care.

To experience this carotid artery stenting case and many others, contact your SimSuite Clinical Educator today!

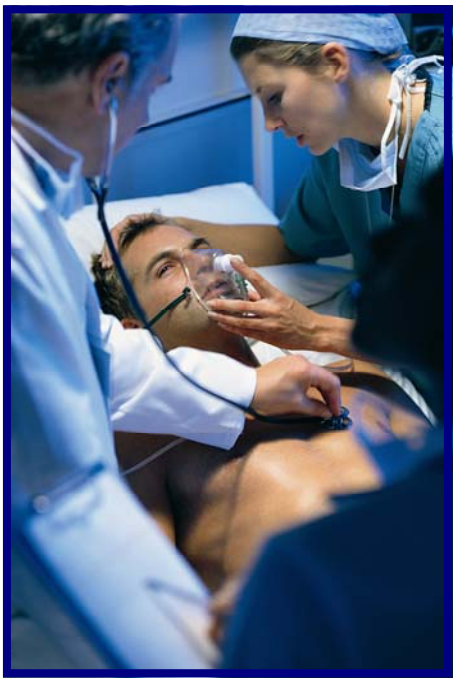
ACLS in a Heartbeat! *(cont'd from page 1)*

defibrillator (AED) knowledge as well as management of a patient experiencing cardiac arrest, commonly known as the "mega code." The exam and skills verification, on average, takes approximately one hour. Benefits of this program include:

- Convenience and flexibility—available anytime, anywhere
- Self-paced learning
- One-hour time commitment in the SimSuite Center
- Decreased time away from bedside
- Reduction in instructor costs
- Decreased need for replacement staff

For healthcare professionals who do not have access to a SimSuite System at their institutions or close by, MSC provides an online course entitled **ACLS Pro**. In this program, the online classroom components are identical to those listed; however, participants have the opportunity to complete the final exam and skills check-off with a local area ACLS provider.

Contact your SimSuite Clinical Educator today to schedule your ACLS recertification.



Employee Spotlight

Emily Conner, RN, SimSuite Clinical Education Specialist St. Luke's Episcopal Hospital, Houston, TX

A native Texan, Emily has over 10 years of clinical experience as a registered nurse. She has spent the majority of her clinical career in invasive cardiology working with adults, pediatrics, and electrophysiology. Prior to the cath lab, Emily worked in critical care and cardiovascular devoted patient care areas. Emily has developed unique programs within the SimSuite Center at St. Luke's. In addition to working with the cardiology fellows and medical residents, she has developed formalized curriculums for the THI School of Perfusion and St. Luke's Episcopal Hospital Circulatory Support team. She works closely with students who rotate through the SimSuite prior to beginning their clinicals. Lecture and simulation sessions are done with students and new employees to familiarize them with basic information in regards to critical care and cardiovascular medicine. Plans are currently underway to develop more programs for varied disciplines in and around St. Luke's.

After having spent over half of her career in academic medicine, Emily believes in the overall value of simulated medicine. "The technology of invasive cardiology and catheter-based procedures has advanced so rapidly over the past 10 years. I am excited to be a part of simulation training with current physicians learning new procedures or physicians of the future who have the advantage of training on a life-like simulator rather than someone's loved one," states Emily. "You can't put a price tag on what simulated medicine has to offer."

Emily is active in the professional community by supporting the Society for Invasive Cardiovascular Professionals as a speaker. She is published in *Cath Lab Digest*. Emily is a member of the American Nurses Association, a Professional Council Member of the American Heart Association and was the chair and founding member of the Central Texas Chapter of the Society for Invasive Cardiovascular Professionals (SICP) based in Austin, TX. She is currently studying for a degree in Business Administration.

In the evenings and on the weekends, you can find Emily spending time with her eight-year old daughter.

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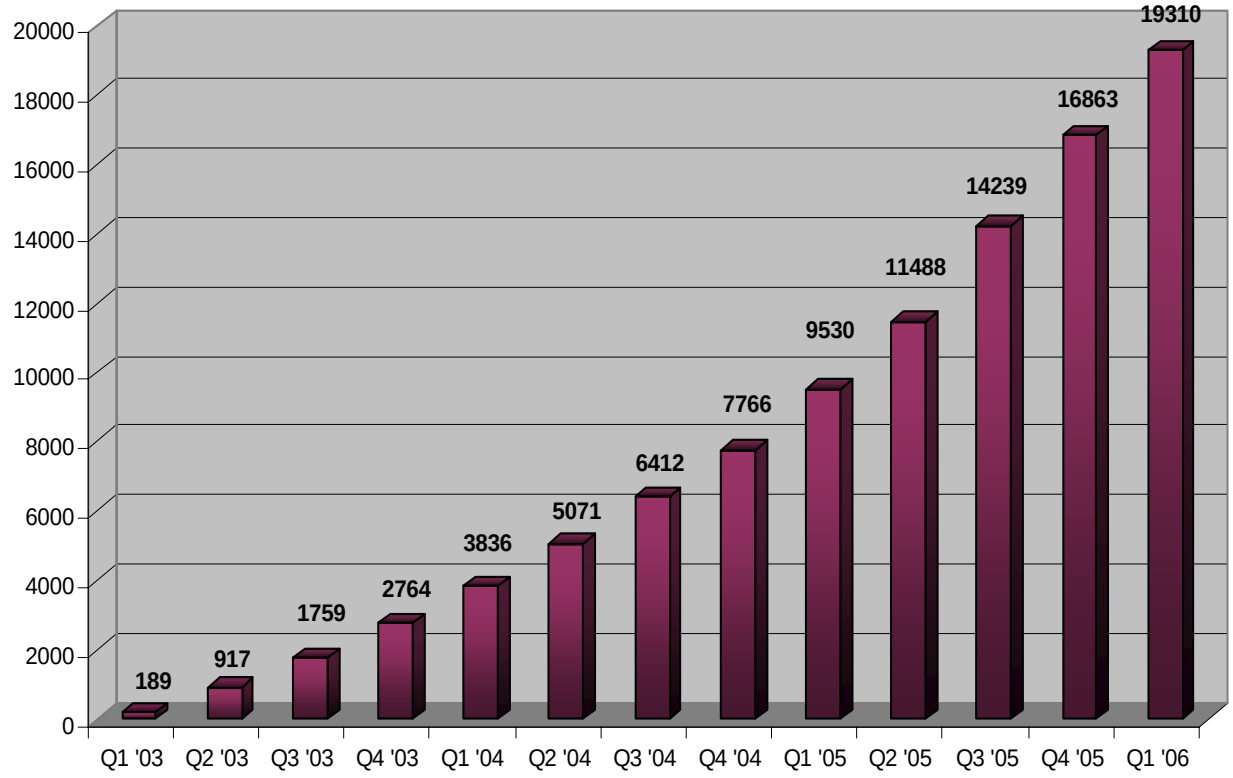
Experience Through Education™

Graph below depicts utilization within SimSuite Education Centers in addition to custom training events, carotid education programs, and training that occurs at trade shows and medical conferences.

Total MSC Training Events



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