The Arizona Emergency Medicine Research Center (AEMRC) is a collaborative statewide Center of Excellence dedicated to improving the health-care outcomes of patients with acute illness and injuries, in both pre-hospital settings and within the hospital.

The center’s research focus extends from the pre-hospital environment, including 911 and emergency medical services (EMS) care, through the emergency department and critical-care settings.

**History**

The AEMRC was founded in 1990 by Harvey Meislin, MD, FACEP, FAAEM, whose vision included the need to dramatically improve emergency systems and the care of patients with emergent problems in the emergency department or in the field. Today, the center is a national leader in emergency medicine research and training, including the application of new resuscitation techniques and event-preparedness training.

**Areas of Emphasis**

The center brings together collaborative teams of multidisciplinary experts to achieve critical impact in areas affecting lives in Arizona today. Current areas of emphasis include improving outcomes in pre-hospital cardiac arrest, pre-hospital traumatic brain injury, emergency-preparedness, pre-hospital systems, clinical-translational medicine and sepsis.

**Impact**

The AEMRC, together with the University of Arizona Department of Emergency Medicine, is a leader in National Institutes of Health funding among centers and emergency departments nationally.

The faculty of the UA Department of Emergency Medicine and the center are national leaders in emergency medicine scholarly activity, regularly contributing state-of-the-art research presentations at the top scientific meetings in the United States and internationally. In addition, most UA Department of Emergency Medicine residents participate in mentored research leading to national presentations and the publication of original scientific manuscripts.

The center has established a statewide clinical research network that conducts many studies, including current trials investigating neurological emergencies and cardiac arrest.

The center has formed research collaborations with many departments and colleges at the UA and with other universities in the state and Southwest. In addition, the AEMRC has developed innovative collaborations with major hospital systems in the state, as well as with rural hospitals serving diverse populations. Also, the AEMRC recently has developed innovative collaborations with foreign countries and industry.

CONTINUED ON REVERSE

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The following studies and programs exemplify the center's ongoing dedication to improving emergent care:

- **The EPIC Study**: The center's EPIC Study is a comprehensive effort to evaluate and train first responders on the national standards for pre-hospital best practices on victims of traumatic brain injury. The "Excellence in Pre-hospital Injury Care" study looks to dramatically increase the number of severe traumatic brain injury victims who survive with good neurological outcomes. To date, more than 75 percent of Arizona traumatic brain injury victims now will receive care from EPIC-trained providers.

- **The NETT POINT study**: The "Platelet-Oriented Inhibition in New TIA and Minor Ischemic Stroke Trial" looks to determine the safety and effectiveness of the combination of low-dose aspirin and a medication called clopidogrel, also known by the brand name Plavix®, in reducing the risk of stroke, heart attacks and other complications in patients who have just had a transient ischemic attack or minor ischemic stroke.

- **The Preparedness Training Institute**: With national and international impact, the center's Preparedness Training Institute offers a variety of courses on emergency preparedness. Training includes continuing education credit for advanced disaster preparedness and response and other courses on recognizing and responding to a terrorist event, the management of public health emergencies, hazardous material (hazmat) life support and other courses on emergency response.

- **The U.S. Consumer Product Safety Commission program**: The center collaborates in various national consumer-safety studies, including tracking every emergency visit at Banner – University Medical Center Tucson involving an injury associated with a consumer product. The center also provides training on consumer product safety on behalf of the U.S. Consumer Product Safety Commission.

**Leadership**

**Samuel M. Keim, MD, MS, director, AEMRC**
Dr. Keim also is professor and head of the UA Department of Emergency Medicine. He received his medical degree from the UA College of Medicine in 1985 and a master's degree in clinical epidemiology from the UA Mel and Enid Zuckerman College of Public Health. His research interests include clinical informatics, evidence-based medicine and border health.

**Kurt R. Denninghoff, MD, associate director, AEMRC (UA College of Medicine – Tucson)**
Dr. Denninghoff is professor and associate head for research at the UA Department of Emergency Medicine, with joint appointments in the UA College of Optical Sciences and UA BIO5 Institute. His research interests include neurological emergencies, sepsis, preparedness, clinical-translational medicine and infection control.

**Daniel W. Spaite, MD, associate director, AEMRC (UA College of Medicine – Phoenix)**
Dr. Spaite is an emergency medicine professor and the Virginia Piper Distinguished Chair of Emergency Medicine. His research interests include EMS systems implementation, traumatic brain injury, cardiac arrest and economic analysis.

**Bentley Bobrow, MD, associate director, AEMRC (UA College of Medicine – Phoenix)**
Dr. Bobrow is distinguished professor of emergency medicine and medical director of the Arizona Department of Health Services Bureau of Emergency Services and Trauma. His research interests include EMS public health implementation, telephone-assisted CPR, and traumatic brain injury.