

Topics for CareFlite's Emergency Care Update 2007

Jeff Beeson DO, RN, LP

“What Lies Beneath”

Imagine being able to evaluate the internal organs of your patient on the side of the road. The use of bedside ultrasound in the Emergency setting has become routine. As technology advances, the prices of the machines continue to decrease. Studies have shown that non-physician practitioners are capable of utilizing ultrasound to assess and treat a variety of conditions. Bedside ultrasound in the Emergency Department has become an everyday occurrence. Nurses are using ultrasound for difficult IV access. There are currently only a handful of EMS programs currently utilizing ultrasound. This too will change. We will review the physics of ultrasound and describe the many clinical applications in the Emergency and Prehospital settings. We will then have a live demonstration of Ultrasound during the lecture.

Lauren Brandt, RN, MSN, CNRN

“New Directions in Neurosciences”

As more and more is learned about the brain, more diagnostic and treatment opportunities are discovered. The 1990's were the “Decade of the Brain” however; the growth of new diagnostic and treatment capabilities has flourished in this decade. This growth is affecting all aspects of medicine, none more so than in the field and in the emergency department. With the mantra of “time is brain” healthcare professionals who are on the front lines are being asked to accurately assess and intervene faster than ever before. This presentation will look at where the neurosciences started, the not so distant history and the amazing growth that is being achieved now. This will provide insight as to how new technologies, new drugs, and other new interventions will continue to affect staff in these areas.

Jason Dush, NR/CCEMT-P, FP-C

“How Well Do I Know Obstetrical Emergencies?”

This presentation will cover the nuts and bolts of obstetrical emergencies. Obstetrical emergencies can seem like routine boring medicine most of the time. How many people are prepared and knowledgeable of the “Real Deal” obstetrical emergency? This presentation is filled with great educational slides of real obstetrical emergencies and delivery complications that pre-hospital providers may be faced with at 1pm or 3am.

Debbie A. Estes, RN, BSN

“Cutting Edge of Stroke: Catch the Stroke Fever”

This presentation will educate healthcare professions about acute ischemic stroke (AIS). Treating AISs is not the same as it was just two years ago. Advances in stroke treatments have expanded acute stroke treatments to nine hours. In 1996 tPA was approved to be given intravenously up to three hours from onset of symptoms. In 2004 the MERCI clot retrieval device was approved up to eight hours from onset of symptoms. Clinical trials are available in the United States for AIS up to nine hours from onset of symptoms and acute hemorrhagic strokes up to three hours from onset. By the end of this sixty minute presentation every participant will have a clear definition of, “What is acute stroke?” and treatment options available in the Dallas/Fort Worth area. Through actual case presentations the attendees will see the requirements every Certified Primary Stroke Centers are expected to achieve the impact on stroke outcomes.

Mike Grill, Fire Captain/Paramedic, MS, MA

“No Kidding!”

Assessing the pediatric patient can intimidate even the most seasoned EMS providers. The reason? Experience and training. With pediatric calls making up only 10% of prehospital responses – and 80% of those are for minor emergencies requiring no ALS measures – our lack of experience results in lower confidence levels. And for many EMS providers, the bulk of their training has focused primarily on adult care, giving little attention to the special needs of critically ill and injured children. This session will provide the EMS provider with the most current and up-to-date pediatric assessment concepts and thereby provide the opportunity to make a significant difference in the outcome of emergencies involving children. FACT: You can estimate the upper limit of a child’s normal heart rate by using $HR=150 - (5 \times \text{patient's age in years})$.

“CPAP ASAP!”

Continuous Positive Airway Pressure (CPAP) is rapidly gaining acceptance as a pre-hospital standard of care for selected patients in acute respiratory failure. In fact, overwhelming evidence suggests that this non-invasive procedure can be easily applied and is effective in reducing intubation – as well as mortality. How quickly do patients using CPAP improve? Dr. Russell Miller, MD, FACEP states that “CPAP is to CHF like D50 is to insulin shock” in patients suffering pulmonary edema secondary to CHF. This session explores the history of CPAP, reviews the respiratory physiology associated with disease states, describes how CPAP helps patients, and reviews the products currently available to EMS providers that make CPAP a safe and cost-effective treatment that every EMS service should be providing!

Ronna Miller, M.D.

“Avian Influenza – Should Our Feathers Be Ruffled?”

Experts concur that the United States is “overdue” for an influenza (“flu”) pandemic. Moreover, a highly lethal strain of avian (bird) flu has been spreading globally since 2003. The next pandemic may or may not be caused by “bird flu”. It most likely will cause massive disruption at all levels of the U.S. healthcare system. EMS and ED providers will be on the front lines for this event.

This session will introduce participants to the basic definitions and naming conventions of influenza terminology, highlighting differences and similarities between seasonal *vs.* epidemic/pandemic flu, and human *vs.* avian flu. The clinical features of human avian influenza will be described. The session will also discuss both pharmacological and non-pharmacological management strategies for avian flu, as well as some of the pre-planning and response challenges facing the EMS and broader healthcare community.

Bill R. Morgan, M.D., F.A.C.S.

“Blast Injures: Etiology and Treatment”

Kenneth Navarro, EMT-P

“The Future of Trauma Resuscitation: Hypertonic Saline”

Despite major advances in the management of trauma victims, traumatic injury remains one of the leading causes of death during the first 3 decades of life. Moreover, effective treatment of critically injured patients with hemorrhagic shock continues to be a formidable challenge. Conventional resuscitation of these patients involves the intravenous administration of a large volume of isotonic or slightly hypotonic (lactated ringers) solution beginning in the prehospital environment. Previous and recent studies have suggested that an alternative resuscitation fluid may reduce mortality in these patients. This presentation will examine the available research on the use of hypertonic saline in the prehospital environment.

David Page, MS, NREMT-P

“The Daily Habits of Clinical Masters”

Are you already the best that you can be? Is plain-ol’ “competence” enough for you? So how does one become the best of the EMS best? This interactive session will challenge you to define EMS greatness and create new professional goals for yourself. We will describe and learn to emulate the qualities of clinical masters. Come to this session and create a road map for becoming a “master” EMS clinician.

“You Make the Call! Cases with a Twist...”

This case-based presentation will walk you through some of the most challenging, REAL EMS calls you can imagine. These puzzling and unique cases will challenge even the most experienced EMS providers. Can you figure out what is wrong with these patients and how to help them?

“Cool It! Therapeutic Hypothermia - Chillin' Just Might Save Their Brain”

What if brain damage from a cardiac arrest continues AFTER the return of a pulse? What if cooling our post-arrest patients can help them walk out of the hospital with fewer neurological deficits? Therapeutic hypothermia has been listed in the last two editions of ACLS... has your EMS system implemented it? Come learn what the research shows and what strategies can be used to cool patients in the prehospital setting.

John Griswell, M.D. and Jon Puryear, NREMT-P

“Does One Good Intubation Attempt Deserve Another?”

How many endotracheal intubation attempts should be allowed to successfully get the tube? What is the definition of an attempt? How long should a patient be allowed to be in a hypoxic state during intubation? What methods may I utilize to improve my intubation to decrease my number of attempts? All of these questions are the “buzz” in the current EMS profession. There is data that suggest that patients with head trauma have significantly increased odds of death or poor neurological outcomes if intubated by ground EMS versus air medical or ER intubation. Why is this? Dr. Griswell and Mr. Puryear will discuss the potential reasons and improvements to this finding. At MedStar, we implemented a “one intubation attempt” and if it unsuccessful, the medic then inserts a Combitube. During this lecture, we will review our results before and after implementation of this policy, and then present methods to better manage the advanced airway. This will include proper BVM techniques, ventilation rates and volumes, endotracheal intubation techniques, transtracheal jet ventilation, and emergency cricothyrotomy devices, pharmacological assisted intubation, and rapid sequence intubation.

Janis Smith, BS, CCLS, CPST

“Through the Eyes of a Child”

Every moment matters when emergency care is needed, every second counts when a life is at stake. As medical professionals, do you provide the same quality care to children as you provide for adults? Do you take the time to provide appropriate individualized care understanding that the needs of children and adults differ even when time is of essence? In this session, you will begin to see, hear, and feel through the eyes of a child. You will gain a better understanding of how the perceptions of children differ from those of adults with regards to medical care. You will understand the importance and benefits of advocating for children in a primarily “adult-focused” healthcare world. More importantly, you will learn the importance of valuing a child for a child, and NOT as a “little adult.”

Mike Smith, BS, MICP

“People Care: Remembering Who We Work For”

People Care helps refocus providers on what really matters most out there in the real world of patient care, with the main goal of the presentation being changing attitudes and behaviors.

“Man vs. Machine”

This is a graphic and hard-hitting presentation. This talk looks at a variety of machinery related injuries. Not for those with weak stomachs.

“When is Enough Enough? The Quest for Resuscitation Endpoints”

This is a high end presentation geared for ALS providers and Nurses. Based on over 20 years of research publications, a variety of resuscitation issues are touched on, as we track the efforts to define at what point we have successfully resuscitated our patients. Put on your thinking caps for this one!

Allen C. Wolfe Jr, RN, CFRN, TNATC

“VADS Here, VADS There, Ambulatory Cardiac Assist Devices Everywhere”

Evolving cardiac technology and severe shortages of donor hearts for increasing numbers of transplant candidates have produced a once never thought of reality: the patient on a portable Ventricular Assist Device (VAD) which allows the patient to be ambulatory and discharged home. As Emergency Management Service Communities around the country become inundated with these patients, they are often unaware that the VAD-supported patients even exist in their area until a tragic accident or mechanical failure brings them face to face with one. This lecture examines the details necessary for transport for pre-hospital personnel, development of a successful training program and Ten Questions you should ask before transporting the most common ambulatory VAD transports.

“Trauma Case Studies”

Invincible, fearless, bold and daredevils are just a few words to describe the people who put themselves in danger for enjoyment and thrills without a single thought of the consequences of possible injuries. As the worlds' youth continue to look for more interesting and intriguing ways to entertain themselves, the civilian and medical community will always be fascinated although concerned by bizarre and unusual mechanisms of injury in which these traumas occur. The mechanism of injury assists the health care provider in triaging casualties, and determining the probability of various types of injury. A logical sequence for the initial assessment and management of trauma patients has been shown to contribute to improved outcomes. The images in this lecture are not for the weak.
