

# Medical Education & Research Institute

We Learn By Doing

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# PURPOSE

- Discuss the process of course development for disaster preparation and required resources
- Identify alternatives to achieving learning outcome
- Importance of building strong community relationships and collaboration

# ABOUT MERI...

- 501 (c) (3) not-for-profit hands-on medical training and research school since 1994
- More than 11,277 students annually from 50 states and 27 foreign countries
- Over 640 anatomical donors annually
- Designated Medical Simulation Center of Excellence in Tennessee
- Combine best practice for multiple hands-on educational strategies
- Students from all medical disciplines including first responders

# MISSION STATEMENT

Mission Statement: To promote general health and welfare by providing quality, medical education and hands-on training, and to promote and foster research in all areas of medicine

MERI Vision: MERI will be the leading hands-on medical education and training institute in the world

# MERI SIMULATION CENTER

- The MERI Simulation Center of Excellence helps you to formulate and deliver an educational strategy that pushes the patient care giver performance to a new level of competency by combining anatomy, physiology, and simulation training
- Offers customized hands-on training to course participants

# EMS DISASTER COURSE

“A More Effective Way of Training”



# EMS DISASTER TRAINING

- **Hands-on EMS Disaster Training:**
  - Improvised Explosive Device-MCI Building Collapse/Anatomy Lab
  - Conducted by: The Memphis Shelby County Metropolitan Medical Response System, Memphis and Shelby County EMS
  - Funded by: Memphis/Shelby County Metropolitan Medical Response System, Plough Foundation, and Methodist Healthcare
  - CEU's Provided by Memphis Division of Fire Services-EMS Training Course

# EMS DISASTER TRAINING COURSE OBJECTIVES

- Initiates pre-hospital procedures used during the treatment of injuries usually encountered in patients as a result of blast and crush injuries from Improvised Explosive Devices (IED)
- Explains and demonstrates proper use of the Incident Command System (ICS) with focus on operational aspects, Medical Branch and its functions
- Effectively applies appropriate use of advanced airway management, intraosseous infusions, Chest decompression, and other advanced EMS skill sets into treatment modalities of patients of mass casualty/blast incidents

# EMS DISASTER TRAINING

- Simulation Exercise Includes:
  - Search and Rescue
  - Triage
  - Treatment
  - Transport
- For pediatric and adult cases
- Hands-On Lab Includes:
  - General Anatomy and Physiology
  - Focused Airway/Chest Anatomy including intubation and advanced airway techniques
  - Anatomy of the upper and lower extremities-vascular access-IO insertion-various sites

# ER NURSING COMPONENT

- Medical Management – Blast, Burn, Crush Injury Adult and Pediatric
- Focused Airway Chest Anatomy
- Anatomy of the upper and lower extremities – Vascular access
- Observing Disaster Scenario of search and rescue techniques with field Triage, Treatment , and Transport
- Interactive skill stations
  - Pediatric station
  - Burn station
  - Orthopedic station
  - Trauma station

# ER NURSING OBJECTIVES

- Demonstrates ability to gather pertinent scene information from first responders regarding mechanism of injury, known hazards, approximate number of victims and patient condition/information
- Demonstrates ability to identify and prioritize numerous multiple trauma victims rapidly utilizing the 5-level triage system
- Identifies life threatening injury/insult during primary assessment utilizing the ABCD of trauma management and immediately initiates treatment of that injury/insult
- Recognizes and utilizes all available resources in the management and support of victim care
- Anticipates plan of care, procedures and assists physicians in management of life saving interventions

# METHODOLOGY

- Lecture and debriefings
- Students divided into 2 groups with 25 per group (1 for procedural lab and 1 for IED event) 5 per group with simulated clinical experience
- The disaster simulation scenarios and procedural cadaver lab training ran concurrently
- Format of the cadaveric portion of the course: practice advanced life-saving skills, including intubation, needle decompression, intraosseous venous access, external jugular access and IV access within a more complex, broad blast/mass casualty/disaster frame of reference
- The event was recorded for further review to assess competency and determine opportunities for additional training

# TEACHING MODALITIES

- **HANDS-ON RESOURCES**
  - Task trainers
  - Procedural labs
  - Simulated clinical experience
  - Practical Anatomy sessions

# BENEFITS

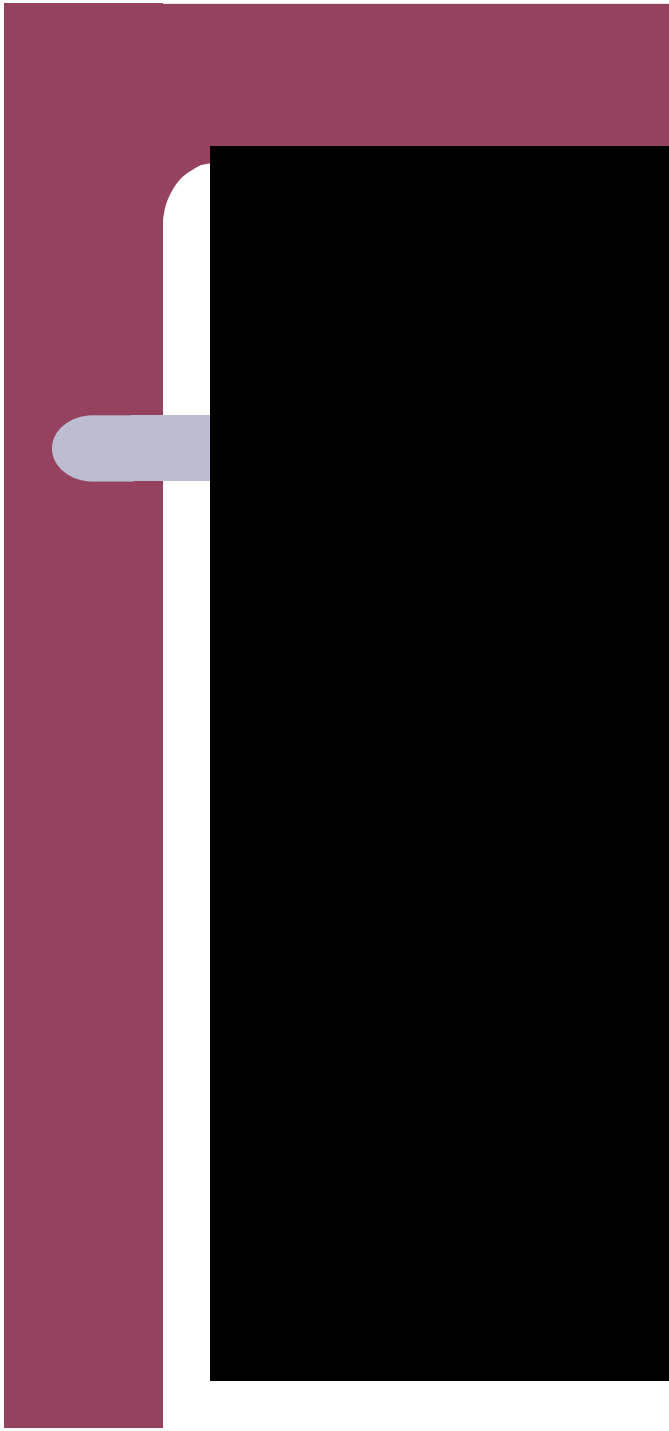
- Visualize anatomical landmarks
- Practice procedural task with life-like feel
- Increase familiarization with clinical equipment
- Anatomy-Physiology connection
- Increase skill proficiency and comfort level
- Encloses the learning circle
- Strikes all learning styles
- Interactive lecture

# COMMUNITY AND VENDOR SUPPORT

- Precision Medical and Vidacare Corporation provided IO supplies and clinical faculty for training course
- Airon Equipment provided portable ventilators for airway station
- Boundtree provided medical supplies such as jump bags, Bougie, Airtrac etc..
- Glidescope offered EMS scope for demo
- Baptist Hospital and Methodist Healthcare System provided educators, breakfast and lunch participants

# APPLICATIONS

- Plant disaster training
- Incorporated into Community Health curriculum
- Public Health Department 1<sup>st</sup> responder training
- Joint civilian and military disaster operations
- National Guard training for medical units
- TN taskforce training
- Urban Search and Rescue training
- Urban Area Security Initiatives



# SUGGESTIONS FOR IMPLEMENTATION

- Identify local funding such as Homeland Security or other training funds already received
- Request funding from local Foundations to create a match to your funds
- Involve local businesses in providing needed supplies, curriculum development and clinical support

# CONCLUSION

- MERI Simulation Center was able to assist the local Firefighter/EMS Division in achieving their goals
- Increased exposure for EMS and Nursing providers
- Enhance skills and competency
- Replicate disaster scene to provide an authentic experience

# Question and Answer Session

