

### Presented by

#### Jeff Solheim, MSN, RN, CEN, TCRN, CFRN, FAEN

Jeff brings with him a wealth of nursing background, including clinical nursing in medical/surgical and emergency medicine, cruise-ship nursing, flight nursing, nursing management and administration, and as a state surveyor and nursing educator. Jeff currently finds his fulfillment speaking in front of audiences around the world on a variety of clinical and motivational topics. He was recently honored by the Emergency Nurses Association with the “Nursing Education Award” for his outstanding contributions to Emergency Nursing through education and publishing, and in 2008, was inducted as a fellow in the Academy of Emergency Nursing. Aside from speaking, Jeff contributes to numerous journals and publications. He is the co-editor of the Manager's Forum for the *Journal of Emergency Nursing*, is a regular contributor to *Nursing Spectrum*, is a content expert for *Healthstreams* and has served as editor or author for numerous books. Most recently, Jeff was the editor for the Emergency Nursing Association's online triage course and wrote an online Certified Emergency Nursing Review course for Mosby-Elsevier.

Aside from his work in the nursing field, Jeff is also the founder and director of a third-world humanitarian organization called Project Helping Hands, which regularly takes medical teams into various third-world countries. Jeff has personally visited over 15 different countries and led over 50 teams through his organization.

Jeff combines his sense of humor with stories from his travels around the world to make each seminar a fun and unforgettable experience.

### 12.5 Contact Hours | Course Length: 886 minutes

### Program Description

This trauma certification review course is designed and developed to prepare nurses specializing in trauma care to take the TCRN Examination. This review course provides topics featured on the examination such as neurotrauma, chest, abdominal, extremity and wound, injury prevention and professional issues in trauma nursing. It also provides hints throughout the course on test-taking skills.

### Program Learning Outcomes

*This program prepares the learner to:*

1. State the assessment, management and potential complications of head/neck, trunk and extremity trauma.
2. Discuss the topics of shock in relation to trauma patients, and identify psychosocial support of families.
3. Identify issues of the continuum of care for a trauma patient from prehospital through rehabilitation or end-of-life.
4. Describe professional issues for trauma nurses, including quality management, safety issues, disaster management, ethics and trauma regulation.

# Topics Covered

## 1 Review of Exam

28 minutes

### Module Description

The Trauma Certified Registered Nurse (TCRN®) Exam is a certification offered by the Board of Certification for Emergency Nursing (BCEN®) and launched in 2016. This certification is meant to provide board certification for nurses dedicated to the care of the traumatically injured patient. Initial certification will require the registered nurse to successfully pass a multiple-choice exam. This session will look at the construct of the exam itself as well as hints to successfully pass the exam.

### Module Learning Outcomes

*This module prepares the learner to:*

1. Describe the purpose of completing a professional nursing certification exam.
2. Verbalize at least two study methods that can be employed to increase success on the exam.
3. List major areas that are tested on the TCRN Exam.

## 2 Special Considerations: Shock and SIRS

130 minutes

### Module Description

Nearly all patients with significant traumatic injuries will develop some degree of shock. Many of these patients will also develop a systemic inflammatory response syndrome (SIRS), and some will even go on into multi-organ dysfunction syndrome (MODS). Even though each of these syndromes is associated with traumatic injury, they differ from other traumatic injuries in that they do not occur at the time of insult but rather arise in the hours or days after the injury. With early recognition and aggressive treatment, the effects of these syndromes can be minimized or even eliminated. This session will define various forms of shock as well as SIRS and MODS. Symptoms of each will be reviewed, current treatment modalities will be discussed and prevention strategies will be covered.

### Module Learning Outcomes

*This module prepares the learner to:*

1. List three effects of inflammatory mediators.
2. Describe the technique for inserting an intraosseous needle into the distal femur, distal tibia, humerus and proximal tibia.
3. Recognize adequate fluid resuscitation using four end points to resuscitation.
4. Develop a treatment plan for a patient experiencing neurogenic shock.

## 3 Special Considerations: Psychosocial

34 minutes

### Module Description

Trauma is unique when compared to other illnesses encountered in the healthcare setting in that it is unexpected, sudden and often creates immediate disability and disfigurement, some of which can be permanent. The sudden nature of trauma, combined with the permanence of its effects can have a profound impact on the trauma patient as well as that patient's support system. On the healthcare team, the nurse typically remains in the closest proximity to the patient and the patient's support system and must be prepared to recognize and intervene in the state of crisis and psychosocial disequilibrium that results after a traumatic injury. This session will cover the assessment and intervention of the psychosocial aspects of caring for the traumatically injured patient.

### Module Learning Outcomes

*This module prepares the learner to:*

1. List at least six effects that a state of crisis may have on a traumatic patient.
2. Verbalize treatment goals for patients with post-traumatic stress disorder.

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## 4 Professional Issues

94 minutes

### Module Description

When preparing for the TCRN Exam, the questions surrounding professional issues may create challenges for many test-takers simply because the topics contained in this section are frequently less familiar to the trauma nurse who has not served in an administrative role. Topics that will be covered in this session will include: trauma center designation/verification, legislation affecting trauma care, performance improvement, research- and evidence-based practice, critical incident stress management and ethics.

### Module Learning Outcomes

*This module prepares the learner to:*

1. List three patient dispositions allowed by COBRA/EMTALA legislation.
2. Apply the performance improvement loop to a case study exercise.
3. Provide an example of quantitative and qualitative research.
4. Identify actions that are taken in the hot, warm and cold zones of a chemical contamination response.
5. List five ethical principles utilized in care of the trauma patient.

## 5 Wound and Burn Trauma

97 minutes

### Module Description

The skin is the largest organ on the human body. It has numerous functions ranging from maintenance of body temperature to prevention of infection to the creation of our individualized appearance. Damage to this organ can have far-reaching effects. This session will look at injuries to the skin, including wounds and burns. Listeners will be introduced to various types of wounds, as well as treatments and special considerations for each one. Various types of burns (thermal, electrical, chemical and radiation) will be introduced as well as special burn situations encountered in the trauma unit.

### Module Learning Outcomes

*This module prepares the learner to:*

1. List three complications associated with a contusion and or/hematoma.
2. List four interventions used to control hemorrhage in patients with amputations.
3. Identify situations when primary, secondary and tertiary closure is most appropriate.
4. Calculate the body surface area burned in a patient with thermal burns.
5. Verbalize four treatment strategies appropriate for patients with electrical burns.
6. Verbalize two complications associated with exposure to hydrocarbons.

## 6 Orthopedic Trauma

35 minutes

### Module Description

When one envisions a traumatically injured patient, it is hard not to imagine a fractured pelvis, ribs, femur or other bones. The skeleton, which provides the rigid framework on which our bodies are shaped, is a frequent target of the forces that cause it trauma. This session will look at the assessment, planning intervention and evaluation of care for patients with orthopedic trauma as well as common complications encountered.

### Module Learning Outcomes

*This module prepares the learner to:*

1. Describe the causes of a Volkmann's contracture.
2. Recognize the symptoms of a fat embolism.

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## 7 Trunk: Thoracic Trauma

81 minutes

### Module Description

Aside from the brain, the thorax houses the most vital structures in the body, namely the heart, great vessels and lungs. Trauma to these areas can cause both immediate as well as delayed mortality. It is essential for the trauma nurse to recognize and intervene in traumatic injuries to the thorax in a timely manner to reduce both morbidity and mortality. This session will look at common injuries associated with thoracic trauma, as well as the assessment, planning, intervention and evaluation of care for patients with thoracic trauma from both a resuscitation as well as an inpatient standpoint.

### Module Learning Outcomes

*This module prepares the learner to:*

1. List injuries commonly associated with blunt cardiac injury.
2. Develop a plan of care for a patient with a pulmonary contusion.
3. Define acute respiratory distress syndrome (ARDS).

## 8 Trunk: Abdominal Trauma

65 minutes

### Module Description

The abdominal compartment contains both solid and hollow organs. Trauma to solid organs tends to cause rapid and severe blood loss. Trauma to hollow organs tends to cause delayed but infectious processes. Either way, the effects of abdominal trauma can provide numerous challenges for the trauma nurse. This session will review types of abdominal trauma, complications related to abdominal trauma, assessment of the abdomen and common diagnostic tests used to identify abdominal trauma. Symptoms, treatment and complications for each abdominal organ will also be reviewed.

### Module Learning Outcomes

*This module prepares the learner to:*

1. Describe the components of an abdominal assessment on a traumatically injured patient.
2. List common complications associated with splenic trauma.
3. Prioritize treatments for patients with rectal trauma..

## 9 Trunk: Genitourinary Trauma

42 minutes

### Module Description

Although there are fewer organs in the genitourinary system when compared with the rest of the abdomen and injuries to the genitourinary organs do not have the immediate life-threatening effects of the thoracic cavity, trauma to the genitourinary system can have significant and long-term consequences for trauma patients. This session will look at trauma to the various genitourinary structures as well as signs, symptoms and interventions. Complications of genitourinary trauma will also be discussed.

### Module Learning Outcomes

*This module prepares the learner to:*

1. Determine if catheterization is indicated after urethral trauma based on patient symptoms.
2. Recognize which complications of renal trauma are early onset and which are late onset.

## 10 Professional Issues

35 minutes

### Module Description

Few things strike fear in the heart of the trauma nurse more than learning that a traumatically injured patient is also pregnant. The pregnant patient is physiologically different than her nonpregnant counterpart, and the physiological changes can have significant impact on assessment and care of the traumatically injured patient. The trauma nurse must also consider the fact that there may be two patients requiring care – the mother and the unborn child, both with unique needs. This session will look at the changes that occur in the body during pregnancy and how they impact care of the trauma patient. Unique needs of the unborn child will also be discussed. Injuries and interventions specific to pregnancy will also be handled.

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### **Module Learning Outcomes**

*This module prepares the learner to:*

1. Determine if laboratory values will be increased or decreased as a normal variation of pregnancy..
2. Define three types of advanced directives.

## **11 Continuum of Care**

**77 minutes**

### **Module Description**

Too many times, trauma care is thought of as something that occurs in the emergency department. Nothing could be further from the truth. Trauma care occurs along a continuum and involves players from the government level through prehospital personnel all the way to rehabilitation and home care. Countless people will ultimately make up the entire trauma team that provides comprehensive care to a traumatically injured patient. This session will look at the various aspects of trauma care from initial prehospital contact through rehabilitation and discharge.

### **Module Learning Outcomes**

*This module prepares the learner to:*

1. Differentiate and define the three types of injury prevention (primary, secondary and tertiary).
2. Choose an appropriate mode of patient transport based on the advantages and disadvantages of that mode of transport.
3. List four risk factors that increase the risk of a patient falling.
4. Define the roles of each of the members of the rehabilitation team.
5. Describe the process of eliciting superficial reflexes to determine the presence of brain death.

## **12 Head and Neck: Neurological Trauma**

**106 minutes**

### **Module Description**

Brain injury remains one of the leading causes of death in traumatically injured patients. Survivors of both brain and spinal cord trauma often live with long-term sequelae that can impact every aspect of their lives. This session will look at both brain injuries and spinal cord injuries. Specific injuries and associated signs and symptoms will be covered. Assessment of both types of injuries will be covered in detail. An in-depth look at treatment and monitoring modalities will also be considered.

### **Module Learning Outcomes**

*This module prepares the learner to:*

1. Select patients who are appropriate for intracranial pressure monitoring based on indications and contraindications.
2. Determine if findings during assessment of the pupils in a brain-injured patient are normal or abnormal.
3. List at least five nursing activities that reduce cerebral metabolism in patients with traumatic brain injuries.
4. List symptoms associated with a diffuse axonal injury.
5. Describe the process of assessing for deficits associated with injuries to the anterior and posterior cords.

## **13 Head and Neck: Neck and Maxillofacial Trauma**

**58 minutes**

### **Module Description**

The human face is the very structure of the body that gives us our identity. It also houses the essential structures of the airway. Nearly every one of the five senses is contained here. Therefore trauma to the neck, maxillofacial area and the eyes can have far-reaching impacts to the victim. This session will look at common injuries involving these structures, including: assessment, planning intervention and evaluation of neck, maxillofacial and ocular trauma.

### **Module Learning Outcomes**

*This module prepares the learner to:*

1. Describe the process for inserting a Combitube.
2. Describe the treatment for an avulsed tooth.
3. Define penetrating and perforating globe injuries.

# Accreditation

## RN/LPN/LVN/Other: 12.5 Contact Hours

MED-ED, Inc. is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation (**ANCC**).

MED-ED, Inc. is an approved provider by the following State Boards of Nursing: **Florida**/FBN 50-1286, **Iowa**/296, **California** #CEP10453.

If your profession is not listed, we suggest contacting your board to determine your continuing education requirements and ask about reciprocal approval. Many boards will approve this seminar based on the accreditation of the boards listed here.

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