

## The Electronic Library of Trauma Lectures® Overview

### Table of Contents

Editors.....	2
Disclaimer.....	5
Contributors.....	6
Preface.....	8
File Organization of the E-Library Presentations.....	9
Presentation Objectives.....	10
How to Use the e-Library.....	14
Lecture.....	14
Internal Education.....	14
Continuing Education.....	15

## Editors



**Patricia Manion, RN, MS**

Patricia A. Manion is an experienced educator, critical care nurse and trauma nurse. Her clinical and educator experience included many years of critical care in surgical, medical and cardiac critical care units. She then became a Trauma Program Manager, a position she held in two American College of Surgeons verified Trauma Centers. Most recently she has been employed as a project manager and an independent educator and consultant. A longtime member of the ENA, she has been a TNCC Instructor and State Faculty, an officer including state president, and received the Emergency Nurse Excellence Award for 2004 from the Michigan ENA. She has been a member of the Society of Trauma Nurses for past 15 years, serving on the Board of Directors as past Annual Conference Chairperson, Secretary, and currently Membership Chairperson. Ms. Manion has taught hundreds of new trauma nurses throughout the state of Michigan and has presented trauma lectures throughout the state of Michigan, at national ENA Scientific Assembly and at STN Annual Conference.



**Vicki J. Bennett, RN, MSN**

Ms. Bennett is the Trauma Program Manager at Scottsdale Healthcare Osborn. She completed her undergraduate degree in nursing at the University of Alabama. Due to her special interest in EMS and Trauma, she then completed the EMT and Paramedic programs and became a licensed paramedic. After working several years as a paramedic, a flight nurse, an ED nurse, and an ICU nurse, she returned to the university in 1990 to complete her master's degree in trauma nursing.

Ms. Bennett has many years of trauma clinical and program management experience. She has been active at the local, state and national levels. In addition to her primary leadership roles, she has also been a consultant to various hospitals seeking trauma center designation and has presented many lectures on a variety of trauma topics. Ms. Bennett is active in many professional organizations and serves as instructor for TNCC, faculty / course director for ATCN, and course coordinator for ATLS. She has been a member of the Society of Trauma Nurses (STN) for many years and served on the Board of Directors in positions of Regional Coordinator, Director at Large, and Treasurer. Ms. Bennett currently serves on the Editorial Board for the Journal of Trauma Nursing.



### **Judy Mikhail, RN, MSN, MBA**

Judy Mikhail is currently the Program Manager for the Michigan Trauma Quality Improvement Program (MTQIP), which is based at the University of Michigan Health System, Ann Arbor. She has over 30 years of progressive trauma nursing experience, most recently as the administrator for Trauma, Bariatrics, and Neuroservices at Hurley Medical Center, a Level-1 Trauma in Flint, Michigan. She began her nursing career in the Burn Unit at Hurley, and progressed from surgical ICU staff nurse to clinical nurse specialist and ultimately a trauma program manager and trauma administrator. Judy earned her diploma in nursing from Hurley Medical Center School of Nursing, her BSN from the University of Michigan, and MSN from the University of Texas. In 2003, she completed work on her MBA from Colorado State University. Judy Mikhail is currently a full-time doctoral nursing student at the Medical University of South Carolina. She has been active in many professional organizations, including the Eastern Association for the Surgery of Trauma (EAST), the American Burn Association (ABA), the American Organization of Nurse Executives (AONE), the Emergency Nurses Association (ENA), the American Association of Critical Care Nurses (AACN), and the Society of Trauma Nurses (STN).

Judy Mikhail is a nationally recognized speaker in trauma care and has been an active educator and course director for PreHospital Trauma Life Support (PHTLS), Advanced Trauma Life Support (ATLS), Advanced Trauma Care for Nurses (ATCN), the Trauma Nurse Core Course (TNCC), the Course in Advanced Trauma Nursing (CATN), Fundamental Critical Care Support (FCCS), and Advanced Cardiac Life Support (ACLS). She serves as an adjunct instructor for the University of Michigan-Flint, School of Nursing. She has authored over 18 publications in trauma, including the evaluation and treatment of abdominal trauma, the use of midlevel providers in trauma centers, injury severity scoring, resuscitation endpoints in trauma, and care of the burn patient. She has won three local research awards. Judy Mikhail has served as President and Treasurer of the board of directors of STN. She has been involved in trauma system development in Michigan, including serving as President of the Michigan Trauma Coalition, and currently serves on the State of Michigan Trauma Advisory Committee.



**Michele Ziglar, MSN, RN**

Michele received her Master of Science in Nursing degree from the University of North Carolina Greensboro in 1994. She has dedicated her past 20 years of nursing to trauma program development at Level I Trauma Centers including the University of North Carolina Hospitals and Shands at the University of Florida. Currently, Michele is the Vice President of Trauma Services for HCA Healthcare serving trauma centers from Florida to Alaska, Prior to joining HCA, Michele was the Director of Trauma and Aeromedical Services at Shands at the University of Florida and was the immediate past President of the Association of Florida Trauma Coordinators (AFTC).

She is well published in the care of trauma patients and has presented at many national conferences. She is a past member of the Board of Directors for the Society of Trauma Nurses and was the Lead Editor for the *Electronic Library of Trauma Lectures* published by the Society of Trauma Nurses

## Disclaimer

Society of Trauma Nurses  
3493 Lansdowne Dr, Ste 2  
Lexington, KY 40517  
859-977-7456  
[info@traumanurses.org](mailto:info@traumanurses.org)  
[www.traumanurses.org](http://www.traumanurses.org)

*Editor: Pat Manion, RN, MS with Vicki J. Bennett, RN, MSN, Judy Mikhail, RN, MSN, MBA and Michele Ziglar, RN, MSN*  
*President: Melissa Harte, RN, MS*  
*Immediate Past President: Elizabeth Seislove, RN, MSN, CCRN*  
*Format Editors: Sarah Clements and Chris Walls*

### Notice

Trauma Nursing is an ever-changing field. Standard safety precautions must be followed; however, as new research and clinical experience broaden our knowledge, changes in treatment and drug therapy become necessary or appropriate. Readers are advised to check the product information currently provided by the manufacturer of each drug to be administered to verify the recommended dose, the method and duration of administration, and contraindications. It is the responsibility of the treating licensed health provider(s) to determine specific treatment interventions and pharmacological regimens based on standard of practice and patient condition. Neither the Publisher nor the editor assumes any responsibility for any injury and/or damage to persons or property.

The Society of Trauma Nurses

The Electronic Library of Trauma Lectures®

Copyright © 2012 by the Society of Trauma Nurses.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing form the Society of Trauma Nurses.

## Contributors

**Vicki J. Bennett, RN, MSN, CEN, CCRN**  
Trauma Program Manager  
Scottsdale Healthcare – Osborn Medical  
Center  
Scottsdale, AZ  
E-Library Editor  
*Abdominal Injuries*

**Cynthia Blank-Reid, RN, MSN, CEN**  
Trauma Clinical Nurse Specialist  
Temple University Hospital  
Philadelphia, PA  
*Genitourinary Injuries*

**Susan A. Cox, RN, MS, CPEN, PHN**  
Director, Trauma and Volunteer Services  
Rady Children’s Hospital  
San Diego, CA  
*General Concepts in Pediatric Trauma  
Care*

**Kathleen Devine, BSN**  
Cooper University Health System  
Camden, NJ  
*Soft Tissue Injuries*

**Terry DiNardo, RN, MSN, CCRN**  
R Adams Cowley Medical Center  
Baltimore, MD  
*Musculoskeletal Injuries*

**Lynn Eastes, RN, MS, ACNP-BC**  
Trauma Program Manager  
Oregon Health & Science University  
Portland, OR  
*Neck Injuries*

**Wendy Edmonds, RN, BSN, JD**  
Trauma Performance Improvement  
Coordinator  
Shands at the University of Florida  
Gainesville, FL  
*Pregnancy in Trauma*

**Diane Floyd, RN**  
Cooper University Health System  
Camden, NJ  
*Soft Tissue Injuries*

**Pamela Golden, APRN-BC, MSN, CCRN,  
TNS**  
Trauma Program Manager/APN  
St. Louis University Hospital  
St. Louis, MO  
*Thoracic Injuries*

**Deborah Harkins, RN, BSN, MBA, CCRN**  
Trauma Burn Nurse Clinician  
University of Michigan Health System  
Ann Arbor, MI  
*Burn and Inhalation Injury*

**Melissa Harte, RN, MS**  
Director, Trauma Services  
Phoenix Children’s Hospital  
Phoenix, AZ  
*General Concepts in Pediatric Trauma  
Care*

**Daniel Judkins, RN, MSN, MPH**  
Trauma Educator & Injury Epidemiologist  
University Medical Center  
Tucson, AZ  
*Mechanisms of Injury: Understanding the  
Kinematics of Trauma*

**Jorie Klein, RN**

Director, Trauma and Disaster  
Parkland Health & Hospital System  
Dallas, TX  
*Hospital Emergency Operations  
Response: Mass Casualty Response*

**Amber Kyle, RN**

Trauma Program Manager  
University MS Medical Center  
Jackson, MS  
*General Principles in the Care of the  
Obese Trauma Patient*

**Patricia Manion, RN, MS**

Fenton, MI  
E-Library Editor  
*Geriatric Trauma  
The Trauma Team: From Prehospital  
through the ED*

**Kathleen D. Martin, RN, MSN, CCRN**

Trauma Program Nurse Director  
Landstuhl Regional Medical Center,  
Germany Joint Theater Trauma System  
Office  
*Maxillofacial and Ocular Injuries*

**Ann Marie McDonald, RN**

Trauma Program Coordinator  
St Barnabas Hospital  
Bronx, NY  
*Traumatic Brain Injury*

**Wendi McNabb, RN**

Trauma & Burn Program Director  
University Medical Center  
Lubbock, TX  
*Burn and Inhalation Injury*

**Judy Mikhail, BSN, MSN, MBA**

Program Manager  
University of Michigan NCRC - MTQIP  
Ann Arbor, MI  
E-Library Editor  
*Hemorrhagic Shock  
Soft Tissue Injuries*

**Donna Nayduch, RN-CS, MSN, ACNP**

Trauma Consultant, K Force  
Evans, CO  
*Spinal Column and Spinal Cord Injuries*

**Stacey Staman, RN, MSN, CCRN**

Cooper University Health System  
Camden, NJ  
*Soft Tissue Injuries*

**Marla Vanore, RN, MHA**

Director, Trauma and Injury Prevention  
Programs  
The Children's Hospital of Philadelphia  
Philadelphia, PA  
*General Concepts in Pediatric Trauma  
Care*

**Michele Ziglar, RN, MSN**

Vice President, Trauma Services  
Executive Management, HCA  
Gainesville, FL  
E-Library Editor  
*The Trauma Team: From Prehospital  
through the ED*

### **The Electronic Library of Trauma Lectures®**

The Society of Trauma Nurses is a professional nonprofit organization whose mission is to ensure optimal trauma care to all people locally, regionally, nationally and globally through initiatives focused on trauma nurses related to prevention, education and collaboration with other healthcare disciplines. The Society of Trauma Nurses' advocates for the highest level of quality trauma care across the continuum. We accomplish this through an environment that fosters visionary leadership, mentoring, innovation and interdisciplinary collaboration in the delivery of trauma care.

The STN brings value to nursing education by introducing one of the most respected educational resources available for teaching nurses. *The Electronic Library of Trauma Lectures®* is a collection of trauma related presentations considered the pre-eminent industry resource on trauma nursing care. The Electronic Library is designed to serve as a complete educational program for training nurses across the trauma continuum of care.

Each presentation contains learning objectives, a detailed lecture format with built-in instructor notes and discussion questions. Additionally, there are posttest questions and answers for each presentation that may be used for self-assessment purposes.

Clinical experts in the field of trauma care participated in the project both as authors and reviewers. Any comments or feedback regarding the Electronic Library are welcomed and may be e-mailed to the [info@traumanurses.org](mailto:info@traumanurses.org).

**Patricia Manion, RN, MS with Vicki J. Bennett, RN, MSN, Judy Mikhail, RN, MSN,  
MBA and Michele Ziglar, RN, MSN  
E-Library Editors**



## **File Organization of the E-Library Presentations**

Files including presentations, self-assessment tests and answer keys and references are stored in four primary folders:

### **Section 1 - General Concepts**

- Chapter 1 - The Trauma Team: From Prehospital through the ED
- Chapter 2 - Hospital Emergency Operations Response: Mass Casualty Response

### **Section 2 – Clinical Concepts**

- Chapter 3 - Mechanism of Injury: Understanding the Kinematics of Trauma
- Chapter 4 - Hemorrhagic Shock

### **Section 3 - Single Systems**

- Chapter 5 - Traumatic Brain Injuries
- Chapter 6 - Maxillofacial and Ocular Injuries
- Chapter 7 - Spinal Column and Spinal Cord Injuries
- Chapter 8 - Neck Trauma
- Chapter 9 - Thoracic Injuries
- Chapter 10 - Abdominal Injuries
- Chapter 11 - Genitourinary Injuries
- Chapter 12 - Musculoskeletal Injuries
- Chapter 13 - Soft Tissue Injuries

### **Section 4 - Unique Populations**

- Chapter 14 - Pregnancy in Trauma
- Chapter 15 - General Concepts in Pediatric Trauma
- Chapter 16 - Geriatric Trauma
- Chapter 17 - Burn and Inhalation Injury
- Chapter 18 - General Principles in the Care of the Obese Trauma Patient

## **Presentation Objectives**

### **SECTION 1 - GENERAL CONCEPTS**

#### **Chapter 1 - The Trauma Team: From Prehospital through the ED**

- Describe the prehospital through Emergency Department (ED) assessment priorities
- Discuss emergent interventions for life threatening injuries
- Explore several evidence based practice changes/controversies in prehospital and ED trauma care

#### **Chapter 2 - Hospital Emergency Operations Response: Mass Casualty Response**

- Facilitate discussion regarding disaster or medical emergency response operations
  - Review the epidemiology of disasters
  - Define the role of Public Health in a disaster
  - Review the phases of disaster response
  - Define the role of hospitals in disaster response
- 

### **SECTION 2 – CLINICAL CONCEPTS**

#### **Chapter 3 - Mechanism of Injury: Understanding the Kinematics of Trauma**

- State how the fundamental principles of physics apply to various types of injuries
- Given a specific mechanism of injury, predict injury patterns

#### **Chapter 4 - Hemorrhagic Shock**

- Recognize hemorrhagic shock signs and symptoms
  - Explain the importance of early control of hemorrhage in trauma patients
  - Describe the management and ongoing evaluation of hemorrhagic shock
  - List the components of damage control resuscitation
- 

### **SECTION 3 - SINGLE SYSTEMS**

#### **Chapter 5 - Traumatic Brain Injuries**

- Identify the functional anatomy of the brain and the effects of traumatic brain injury (TBI)
- Describe the initial management and neurological assessment of the TBI patient
- Explain management strategies to reduce the risk of secondary injury

## **Chapter 6 - Maxillofacial and Ocular Injuries**

- Identify the key anatomical structures of the face and eye and the impact of force on those structures
- Discuss assessment priorities for a patient with maxillofacial and ocular injuries
- Prioritize the care of a patient with facial and ocular injuries
- Discuss psychosocial support for a patient with maxillofacial and ocular injuries

## **Chapter 7 - Spinal Column and Spinal Cord Injuries**

- Identify the components of the spine
- Assess for spine and spinal cord injury
- Discuss the initial management of the spinal cord injured patient
- Evaluate the long term needs of the spinal cord injured patient
- Describe effects of spinal cord injury on the rest of the body

## **Chapter 8 - Neck Trauma**

- Examine the spectrum of neck trauma, the mechanisms of injury and associated injury patterns
- Define the three zones of the neck used as classifications of injury
- Identify the appropriate diagnostic modalities used to evaluate patients with neck trauma
- Explain the therapeutic interventions in the management of neck trauma
- Identify nursing interventions important in caring for patients with neck trauma

## **Chapter 9 - Thoracic Injuries**

- Describe resuscitative interventions for patients with thoracic trauma
- Explain clinical manifestations associated with life-threatening injuries
- List life-threatening injuries that should be identified during the primary survey
- Identify general treatment for patients with thoracic trauma

## **Chapter 10 - Abdominal Injuries**

- Describe common mechanisms of injury seen in abdominal trauma
- Discuss various injuries of the abdomen
- State appropriate assessment and diagnostic studies for the patient with abdominal trauma
- Describe abdominal compartment syndrome and the importance of its early recognition

## **Chapter 11 - Genitourinary Injuries**

- Describe the mechanisms of injury for genitourinary (GU) trauma
- Identify the appropriate physical assessment and diagnostic studies for the initial and ongoing assessment of the GU injured patient
- Identify three complications that can occur during the hospitalization of a patient who has sustained a GU injury

## **Chapter 12 - Musculoskeletal Injuries**

- Identify the initial assessment for patients with musculoskeletal injury
- Describe upper extremity, lower extremity and pelvic musculoskeletal traumatic injuries and implications for nursing care
- Explain indications and strategies for open and closed reduction of fracture/dislocations
- Discuss the prevention, recognition and interventions for compartment syndrome and rhabdomyolysis

## **Chapter 13 - Soft Tissue Injuries**

- Define the major phases of wound healing
  - Identify host determinants of wound healing
  - Describe surgical and non surgical treatments of soft tissue injuries
- 

## **SECTION 4 - UNIQUE POPULATIONS**

### **Chapter 14 - Pregnancy in Trauma**

- Discuss the epidemiology, incidence and prevention of trauma in pregnancy
- Identify physiologic & anatomic changes in pregnancy pertinent to trauma care
- Discuss resuscitative management unique to the pregnant trauma patient

### **Chapter 15 - General Concepts in Pediatric Trauma**

- Describe at least one difference in the respiratory and cardiovascular system between children and adults
- Discuss assessment of Traumatic Brain Injury in the pediatric patient
- Identify the differences in spinal, thoracic, and abdominal injuries in the pediatric patient relative to adults
- Identify physical differences and specific developmental stages for different age groups and apply assessment and intervention strategies
- Discuss at least two important considerations in the approach to victims of child abuse

### **Chapter 16 - Geriatric Trauma**

- List the most common mechanisms of injury in the elderly
- Discuss 4 physiological changes that make the elderly trauma patient vulnerable to complications
- Describe issues with pain control in the elderly
- Describe the effectiveness of rapid reversal protocols in the head injured patient on antithrombotics

### **Chapter 17 - Burn and Inhalation Injury**

- Identify types of burn injury
- Describe assessment of the burn patient
- Evaluate treatment options
- Identify patients requiring transfer to a burn center

### **Chapter 18 - General Principles in the Care of the Obese Trauma Patient**

- Describe how the obesity epidemic impacts the delivery of trauma care.
- Discuss considerations needed in the initial assessment of the obese trauma patient
- Describe the management of blunt, penetrating, and burn injuries in the obese patient

## How to Use the E-Library

### How to Use the Presentations for a Lecture - Instructions for Instructor

The Electronic Library of Trauma Lectures® contains:

- 1) Eighteen lectures in the Presentation Folder
- 2) Corresponding tests with answer keys in the Self-Assessment Test Folder
- 3) References for presentations in the References Folder

#### Presentation Folder

The presentation folder consists of twenty-one lectures in four sections:

- Section 1 General Concepts in Nursing
- Section 2 Clinical Management Concepts
- Section 3 Single System Injuries and
- Section 4 Unique Patient Populations

The instructor can use the Power Point presentation in three ways.

1. **Slide Show:** The slide series will open in the slide show mode ready to be used for presentation.
2. **Notes Page:** Click the View Tab and choose Notes Page for extensive notes available to be used by the instructor.
  - a. These notes are also available in the “Speaker Notes” folders.
3. **Handout:** Print Slides 3 per page which can be used as a handout for the attendee.

#### Tests and Answer Key Folder

There are eighteen tests and answer keys corresponding to each of the presentations in the folders labeled Self-Assessment Tests and Answer Keys.

#### File Formats

The presentations are saved in PowerPoint format. The speaker’s notes, tests and answer keys are saved in Adobe Acrobat format.

### How to Use the Presentations Internally

The Electronic Library of Trauma Lectures® may be distributed for the purposes of educating a mass group of nurses internally, for online education, and self-study.

Institutions interested in this method should send a letter of request via mail or email to the Society of Trauma Nurses. Upon review, STN will provide the requestor with a

signed letter granting the institution permission to distribute the presentations internally within the hospital system.

Send Correspondence to:

Society of Trauma Nurses  
Sarah Clements, Program Manager  
3493 Lansdowne Dr, Ste 2  
Lexington, KY 40517  
[sclements@traumanurses.org](mailto:sclements@traumanurses.org) (email requests are permitted and encouraged)

### **Continuing Education**

The Electronic Library of Trauma Lectures® is not approved for continuing education nursing contact hours although the files and resources included with the presentations are designed so that institutions may apply for approval using the materials provided in the files.