

# Introduction to Trauma Curriculum

William Schechter, MD  
Professor of Clinical Surgery  
University of California, San Francisco  
Chief of Surgery  
San Francisco General Hospital



# Why study Trauma?

- Sudden
- Unexpected
- Props of civilization stripped away
- The injured patient faces his own mortality
- A common disease
- More common among the young



- *When the drum beats to quarters is now a time of fearful expectation, and it is now the surgeon feels how much the nature of the wounds which might be brought to him ought to have occupied his mind in previous study.*



Sir Charles Bell, 1855



*Proper Prior  
Preparation Prevents  
Poor Performance*



# Spectrum of Trauma Care

- Field Care
- Transport
- Emergency Room
- OR
- Radiology
- ICU
- Ward
- Rehabilitation



# Tri-modal Distribution of Death after Injury

- Death at the Scene
  - Massive head injury
  - High spinal cord injury
  - Massive exsanguination (eg. Aortic Disruption)
- Death within the first hour of injury
- Death days to weeks following injury
  - Sepsis
  - Brain death
  - Multiple organ failure



# How can we reduce morbidity and mortality

- Death at the scene
  - PREVENTION
- Death during the first hour
  - Prompt diagnosis and treatment of all life threatening injuries
- Death days to weeks after injury
  - Prompt therapy plus excellent intensive care



# The Golden Hour

*Time is of the Essence*





# Usual Medical Model

- History
- Physical Examination
- Laboratory Data
- Differential Diagnosis
- Additional Studies?
- Definitive Diagnosis
- INITIATE THERAPY



# Trauma Model: Two Parallel Processes

- Immediate Initial Physiologic Therapy
- Immediate Diagnostic Investigation

We begin to treat the patient before we know what is actually wrong!!!!!!



# The Concept

- Primary Survey
- Stage of Resuscitation
- Secondary Survey
- Definitive Care
- Transfer
- Rehabilitation



# Primary Survey

- Airway
- Breathing
- Circulation
- Disability (Mini-Neurological Examination)
- Exposure



# Resuscitation Stage

- Re-evaluation of ABC
- Monitors
- Gastric Tube and Foley (if necessary)
- X-RAYS



# Secondary Survey

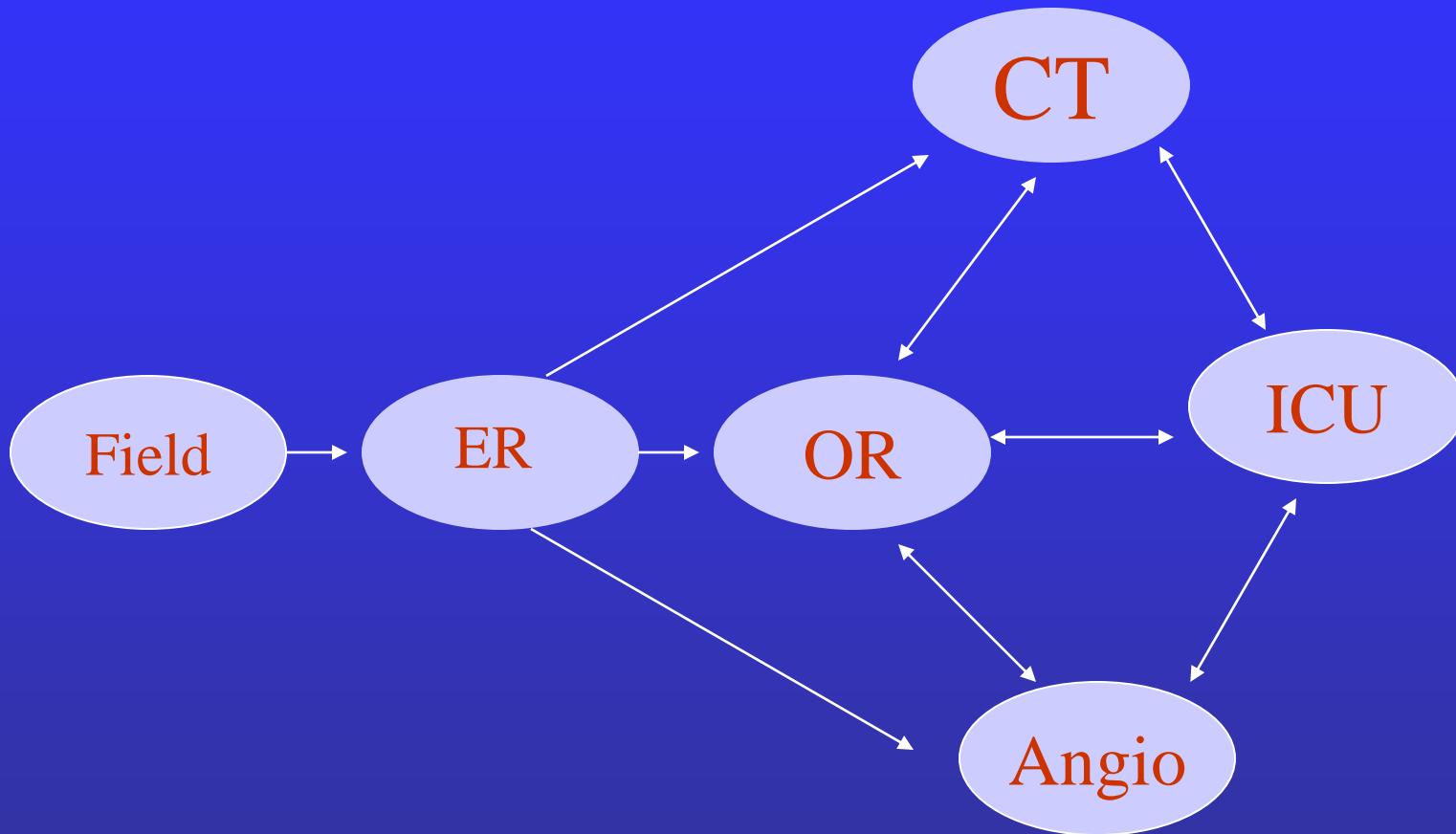
- Head to toe examination
- If patient deteriorates – return to A in the primary survey



# Injuries that threaten life during the “Golden Hour”

- Airway Obstruction
- Tension Pneumothorax
- Open Pneumothorax
- Massive Hemothorax
- Cardiac Tamponade
- Flail Chest/Pulmonary Contusion
- External Hemorrhage
- Massive Intra-abdominal Hemorrhage







# Primary Survey

- Field
- ER
- OR
- X-RAY



# Secondary Survey

- ER
- OR
- X-ray
- ICU



# Tertiary Survey

- ICU
- Ward



# Mass Casualty Event

- Definition
- How does treatment differ from routine trauma care?



# Summary

- Golden Hour
- The Concept
  - Primary Survey, Stage of Resuscitation, Secondary Survey, Definitive Care, Transfer, Rehabilitation
- Continuous Reassessment of Primary and Secondary Survey
  - ER, OR, ICU, RADIOLOGY

