Critical Care in the Emergency Department

Jenny Wilson MD, MS
May 29, 2014

Disclosures

• No conflicts to disclose

Overview

• ED critical care by the numbers
• Scope of practice
• Collaborations
• Current controversies
• New directions

ED Critical Care By The Numbers
What percentage of ICU patients are admitted from the ED?

A. 20-40%
B. 40-60%
C. 60-80%


Median ED LOS for Critically Ill?

A. <1 hr
B. 1-2 hrs
C. 2-3 hrs
D. 3+ hrs


Scope of Practice

- Resuscitate the undifferentiated critically ill patient
  --lines, tubes, electricity, fluid, blood
- Diagnose life-threatening conditions
  --e.g. stroke, MI, CHF, dissection, bleeding, acute abdomen, sepsis
- Initiate critical treatment early
  --e.g. TPA, ASA, heparin, afterload reduction, antibiotics
- Triage to appropriate service/unit
- Begin communication with family
What the ED (Often) Can’t Do

- Focus 100% of resources on one patient for extended periods
- Individualize initial work-up and treatment for all critically ill patients
- Establish longitudinal therapeutic relationships

Which Patient Do You See First?

A. 2 week old infant with fever and lethargy
B. 82 yo woman in Afib with BP of 85/60
C. 42 yo man with sore throat, hot potato voice, and pooling secretions
Collaborative Care

Collaborations
- Trauma
  - Regionalization, ATLS
- ACS
  - STEMI centers, protocols to minimize DTB time
- Stroke
  - Stroke centers, EM/rad/neuro collaboration
- Sepsis
  - Protocols/bundles
- Post-Arrest Care
  - Cardiac Arrest Centers, targeted temperature management, invasive monitoring, etc.

Controversies
- Prehospital airway management
- Ambulance diversion
  - Limits of focused cardiac ultrasound
  - Epinephrine/early defib in cardiac arrest
  - Bypassing ED for cath lab activation
  - Target temperature in post-arrest patients
  - Sepsis care since ProCESS
  - Antifibrinolytic agents and transfusion ratios in trauma

New Directions

- ED ECMO
- Novel decision rules, clinical scoring systems, and biomarkers
- The ED ICU


References


ED-Critical Care Pathways