NEWLY HATCHING CONCEPTS FROM THE EAGLES

CHRISTOPHER KAHN, MD, MPH, FAEMS

EMS MEDICAL DIRECTOR, CITY OF SAN DIEGO FIRE-RESCUE DEPARTMENT

GROUND RULES

- None of the items being discussed today are to be construed as recommendations, protocol updates, new policies, or suggestions
- This presentation is designed to share some of the topics of conversation at the recent Eagles meeting
  - Eagles: group of large metropolitan area medical directors
- These are not necessarily evidence-based, or even consensus-based
- These are simply interesting topics that may or may not be worthy of further discussion

MASS CASUALTY INCIDENTS

- Moving from triage tags to other systems
  - May not be feasible to hands-on triage hundreds of patients
  - Police may be able to transport critical patients while EMS is still setting up for triage
- Moving from "bed available" requests to "here's what you're getting" notifications
  - Based on level of incident (A-D) and a fixed expectation/allotment per hospital
- Conversion of a regular transportation bus into a mass casualty transportation unit
  - 15 beds, 10 seated positions OR 26 seated positions
  - Can be used for fireground rehab, mass gathering medical care

RESUSCITATION

- Double-sequential defibrillation not yet proven to be more effective than standard defibrillation
  - Defibrillator damage can occur, and isn't covered by warranty
- Serial ECGs may improve detection of STEMI
- Termination of resuscitation
  - Based on time? Different times for different rhythms?
  - Based on $EtCO_2$?

RESUSCITATION

- Expanding use of ECMO
- Alternate strategies for refractory ventricular fibrillation
  - Avoiding epinephrine
  - Using β-blockers
  - Using Intralipid
  - Using mechanical CPR device with direct transfer to cath lab
- Importance of bystander CPR, EMD-assisted CPR

RESUSCITATION

- IV nitroglycerin for CHF treatment
  - Avoid the loss of NIPPV (CPAP) benefit
- Push-dose epinephrine for hypotension
- Is epinephrine of any value in cardiac arrest?
- Heads-up CPR positioning
  - Coupled with ITD use

TRAUMA

- Discussed prehospital use of whole blood, FFP, and TXA
- Reminder of need to use tourniquets and hemostatic gauze early
  - Waiting until trauma center arrival is too late
- Should we work patients with post-traumatic cardiac arrest?
  - Improved survival with early (within ten minutes) use of TXA, blood, and finger thoracostomy
- Hypotension (both depth of the BP drop and length of time involved) is really, really bad for traumatic brain injury
  - 10 minutes at SBP 70 increases mortality 20% over 10 minutes at SBP 80

MEDICATIONS

- Ketamine for pain
- Ketamine vs. midazolam for severe agitation
- Reminder on EMS role in public health surveillance
  - Infectious diseases
  - Drug of abuse trends
- Morphine vs. fentanyl

DRUG ABUSE

- Implications of marijuana legalization
- Addiction stabilization centers as an alternate transportation option
- Sobering centers as an alternate transportation option
- Expanding use of naloxone
- Reminder of need to focus on ventilation rather than naloxone administration

SOCIAL AND BEHAVIORAL CHALLENGES

- Rapid assessment and re-direction for patients with social needs
- Need for more data and data integration
  - EMS
  - Hospitals
  - HUD
  - Criminal justice system
- Value of intensive case management

MISCELLANEA

- Texting to 9-1-1
  - Problems with accuracy, speed, loss of auditory clues
  - Might be useful for LEO dispatch
- Prehospital steroids may decrease length of stay and admissions in pediatric asthma
- Prehospital provider injury prevention
- Medical student EMS rotations
- Integration with hospice programs

PRESENTATIONS AVAILABLE AT HTTP://GATHERINGOFEAGLES.US