From the Air to the Ground: Air Medical Safety Standards Applied to Ground Critical Care

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Objectives

- Discuss ground safety history and problems
- Overview Air Medical safety mindset
- Compare and Contrast Air and Ground CCT safety practices.
- Apply Air Medical Best Practices to Ground CCT
The Problem

• Air medical incidents, accidents, and fatalities are high-profile and easily tracked.

• Ambulance incidents, accidents, and even fatalities are inconsistently tracked with no single national database.
The Problem

• A recent NFPA study shows:
  – There are more than 11 ambulance crashes daily
  – A fatality in an ambulance accident every 2 weeks
  – Estimated to be a higher rate per miles driven than the average driver
The Problem

- EMS in general has little culture of crew resource management and team safety when compared to the Air Medical world.
- Ground is largely perceived as a “can always do” mode of transport.
- Inadequate training in EVOC, situational awareness, CRM, risk management, weather, etc.
Solutions

- Crew Resource Management
- Dispatch
- Walk Arounads
- Weather reporting and decisions
- Vehicle Reporting
- Safety Gear
- Fatigue and Stress Management
Crew Resource Management

- Introduced into airline cockpits
- Crew cohesion
- Awareness of crew dynamics
- Checklists
- Standardization
- Situational Awareness
- Workload management
Dispatch

- 911 vs Ground CCT
- Ground CCT vs Air
- Call acceptance
- Hazards Survey and Awareness
- Patient Information
- Options to decline
Walk Arounds

- Standard practice in the air medical world
- Often a “walk to” in EMS / Ground CCT
- Equipment damage
- Vehicle damage
- Personnel Injury
- Preventable accidents
Weather

- Primary concern in air medicine
- Often an after-thought in Ground CCT
- Weather reporting
- Weather monitoring
- Oversight of go/no go decisions
- Cancel / aborts
Vehicles

• Daily maintenance
• Performance checks
• Reporting of issues
• Tracking and oversight
Operator Management
Operator Management
Operator Management
Safety Gear

- Helmets (??)
- Hearing protection / communication
- Restraint devices
- Visibility
Safety Management Systems

• Recognizing the organization's role in accident prevention, SMSs provide:
  – A structured means of safety risk management decision making
  – A means of demonstrating safety management capability before system failures occur
  – Increased confidence in risk controls though structured safety assurance processes
  – An effective interface for knowledge sharing between regulator and certificate holder
  – A safety promotion framework to support a sound safety culture
Safety Management Systems

• Basics:
  – All about the safety of the decision making process throughout the organization
  – Understand the difference between quality and safety.
Safety Management Systems

**The Four SMS Components**

**Safety Policy**
Establishes senior management's commitment to continually improve safety; defines the methods, processes, and organizational structure needed to meet safety goals.

**Safety Assurance**
Evaluates the continued effectiveness of implemented risk control strategies; supports the identification of new hazards.

**Safety Risk Management**
Determines the need for, and adequacy of, new or revised risk controls based on the assessment of acceptable risk.

**Safety Promotion**
Includes training, communication, and other actions to create a positive safety culture within all levels of the workforce.
Safety Management Systems

• No current formal system exists for EMS
• Several products are available through consultants
• Much of the process can be started through an Accreditation process
Accreditation

- Commission for Accreditation of Medical Transport Systems (CAMTS) accredits air ambulance programs.
  - Assures hiring standards
  - Assures training requirements
  - Requires safety minimums higher than the FAA
Accreditation

• Commission on Accreditation of Ambulance Services (CAAS) accredits ground EMS.
• Provides a good basis for proper policy and procedure
• Assures training and safety standards
• Can be the foundation for assessing and assuring a quality safety culture
Conclusion

• The dangers in ground EMS and CCT are numerous.

• Much less attention is paid due to the high volume of vehicles and lower media coverage of events.

• Cross coverage between air and ground standards leads to greater safety, lower operating costs, and better operations.
Questions