USA EMS

- EMS Systems - >15,000
- Personnel - ~1 million
  (~30% F/T professional & 70% volunteer)
- Vehicles - ~50,000
  (Type I, Type II, Type III, Freightliners, ?motorcycles)
- Transports - ~30 million patients
  (to Emergency Depts ~ 50%, < 1/3 emergent)
- Cost - ~$5 Billion annually
- Safety Oversight - ? Disparate

Why Z15 encompasses

- Safety Program
- Safety Policy
- Responsibilities and Accountabilities
- Driver Recruitment, Selection and Assessment
- Organizational Safety Rules
- Orientation and Training
- Reporting Rates and Major Incidents to Executives
- Oversight

Scope of the Z15.1 Standard

- For the safe operation of motor vehicles owned or operated by organizations, including:
  - Definitions
  - Management Leadership Administration
  - Operational Environment
  - Driver Considerations
  - Vehicle Considerations
  - Incident Reporting and Analysis

- These practices are designed for use by those having the responsibility for the administration and operation of motor vehicles as a part of organizational operations.

Z15 Vehicle and Driver aspects

- Operational Environment
  - 4.1 Occupant Restraints
  - 4.2 Impaired Driving
  - 4.3 Distracted Driving
  - 4.4 Aggressive Driving
- Driver Qualifications
- Vehicle
- Vehicle Acquisition
  - E6.1 Safety Considerations
- Vehicle Inspection & Maintenance
- Incident Reporting & Analysis
**Z15 Incident Rates**

- Incident rate based on number of vehicles operated:
  \[ \text{Incident rate} = \frac{\text{Number of incidents}}{\text{Number of vehicles}} \times 100 \]

- Incident rate based on vehicle mileage:
  \[ \text{Incident rate} = \frac{\text{Number of incidents}}{\text{Vehicle mileage}} \times 1,000,000 \]

- Injury incident rate based on vehicle mileage:
  \[ \text{Injury incident rate} = \frac{\text{Number of incidents with injury}}{\text{Vehicle mileage}} \times 1,000,000 \]

- Incident rates based on service activity:
  - Motor vehicle operations that pose injury risks other than those associated with driving should also use the service activity as the basis of a safety performance rate. The number of deliveries, stops, or loads should be considered as appropriate indicators of performance.
  \[ \text{Incidents per 10,000 transports} = \frac{\text{Number of incidents}}{\text{Number of transports}} \times 10,000 \]

- Vehicle injury rates based on work hours:
  \[ \text{Vehicle incidents per 200,000 hours} = \frac{\text{Number of incidents}}{\text{Number of hours worked}} \times 200,000 \]

**Z15-2006**

**Some new challenges**

- 1. Crash reporting to whom?
- 2. Crashworthiness to what standard?
- 3. Ergonomics based on what ergonomic requirements?
- 4. Driver selection/training and monitoring - based on what guidelines?

**Hidden costs**

- What do ambulance crashes really cost?
- Collisions are the largest liability cost and exceeds malpractice or negligence
- Besides the direct financial costs of replacing a damaged ambulance and equipment, there are additional hidden costs incurred:
  - investigating the ambulance collision
  - litigation/settlement/lawsuit
  - medical/disability costs of injured EMTs
  - hiring of new employees to replace injured personnel
  - retraining and psychological counseling of personnel involved and others
  - increased insurance rates

**If we know this – and its published....**

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**This is happening out there NOW....**

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Gregg Theunes Appeal to his Senator, December 29, 2005

‘Pizza delivery truck’ approach has got to go
As do the religious ‘beliefs’ about occupant protection
Z15.1 – we must at least know what we are doing and have consistent and meaningful safety programs and practices

Safety oversight of what and by whom

- Vehicle Safety
- Vehicle Design
- Safety Equipment Design
- Vehicle and Safety Equipment Testing and Standard development
- Safety policies

EMS Update
February, 2006

The Office of Emergency Medical Services

The National Transportation Safety Board (NTSB) is pleased to announce the creation of the Office of Emergency Medical Services (EMS). Recognizing the essential and increasing role of the EMS system in the overall safety of our Nation, the NTSB has established a new office to oversee safety improvements in the EMS system.

The NTSB is responsible for investigating and reporting on the causes of transportation accidents. The NTSB has established a new office to oversee safety improvements in the EMS system.

The National Transportation Safety Board (NTSB)

History and Mission

The National Transportation Safety Board is an independent federal agency charged with investigating every civil aircraft accident in the United States and significant accidents in the fields of transportation—land, sea, air, pipeline. The NTSB conducts safety studies and issues regulatory recommendations aimed at preventing future accidents. The NTSB operates under the authority of Title 49 of the United States Code, Chapter 3, Subtitle A, Title 49, Chapter 441, Title 49, Chapter 467.

The NTSB is responsible for investigating and reporting on the causes of transportation accidents and issues safety recommendations aimed at preventing future accidents.

The NTSB operates under the authority of Title 49 of the United States Code, Chapter 3, Subtitle A, Title 49, Chapter 441, Title 49, Chapter 467.

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