EMS Subspecialty Certification

2.4.5 Service Delivery Models
2.2.2.1 Response and Transport Vehicles
2.2.2.2 EMS Provider Levels
2.2.2.3 Service Delivery Models
2.2.2.4 Equipment Design and Supply Issues

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Learning Objectives

Upon the completion of this program participants will be able to:

- Discuss the types and categorization of EMS Vehicles.
- Identify key components of a Tiered Response system.
- Discuss the advantages and disadvantages of the most common Service Delivery Models.
- List the 4 levels of EMS Provider Levels described in the 2005 National EMS Scope of Practice Model.
- Discuss Equipment and Supply Chain issues associated with EMS systems.

Vehicles

- Transport vs. Non Transport
  - QRS, First Responders, Supervisors
  - Specialty – i.e., Rescue, Scuba, HazMat, etc.
- Level of care
  - BLS
  - ALS
  - Advanced
- Vehicle type
  - Helicopter, Boat, Ground Ambulance...
  - KKK standards
**Tiered Response**

- A temporal level of response
  - Historically combinations of BLS and ALS
    - **Single tier** - one resource to each request for service
    - **Multi tier** - two or more resources
      - First Responders (often BLS)
      - Transport Unit (often ALS)

**4 Tiers**

- **First Tier – Dispatch**
  - Referral to RN line, poison control, etc.
  - Non emergency dispatch (no L&S)
  - Emergency Dispatch

- **Second Tier – Rapid response**
  - First Responders – usually BLS
  - ? Role of ALS in first response

- **Third Tier – Transportation**
  - BLS and ALS or all ALS

- **Fourth Tier – Selected non transport response**
  - Advanced practitioners, critical medics, etc...
Service Delivery Models

• Fire Based
• Hospital Based
• Private service
• Third service
• Public Utility model
• Franchise model

• Paid/Volunteer
• Tiered
• QRS services
• Wilderness
• Disaster Response
• Many more....

Fire-based EMS Systems

• Largest group of EMS providers
• Low frequency of fires - Available to do EMS
• Infrastructure exists
  — First responders
  — Short response times
  — Cross train (all or some)
  — Rescue

Fire-based EMS Systems

Pros

• Job satisfaction
• 2 providers for the price of one (Firefighter/EMS)
• FLSA Overtime 7 (k) exemption
  — Overtime payment after 53hrs (not 40hrs) even for FF doing EMS
• Depth of resources

Cons

• Can’t bill if no transport
• Require additional vehicles for transport
• Medical director
  — Must learn culture, fire ground ops, policies....
• Potential clash of roles of suppression/EMS/culture
• In traditional model suppression, not medicine, is paramount
Third Service EMS

- Unique public safety entity
  - Police and Fire are considered first and second
  - Large urban areas with single governmental agency

- Medical Director Issues
  - Medical culture amongst personnel and management
  - A multi-agency Medical Director may be the only unifying factor
  - Medical director may not provide oversight for other agencies
  - Lack of control of services provided by other agencies, i.e., rescue or other specialty areas.

Advantages

- Ability to focus
  - Budget and policies are directed towards EMS operations
  - Personnel focus on emergency medical care
  - No additional duties/training i.e., fire fighting

- Fire fighting and EMS duties are distinct
  - Personnel may have aptitude/desire for one
  - Hiring can focus on candidates with strong medical background

Concerns

- EMS is often viewed as the “stepchild” service
  - Obtaining smaller funding and budgets
  - EMS providers often are paid less

- Ongoing concerns of merger/consolidation
  - Fire departments take on EMS duties to preserve their budget and personnel.
  - Perception that EMS can be run more efficiently if integrated into another agency
Private Sector EMS

- History - EMS can be a lucrative business
- EMS contracts with community
  - First response may be done by fire
  - Funded by patient or third-party payer
  - Fiscally responsible
- Medical Direction
  - Ideally provided by EMS Medical Director not a remote physician
- Future
  - Threats – Decreased reimbursement, Fire takeover
  - Opportunities - Partnerships

Hospital-based EMS

- EMS truly integrated into the healthcare system
  - Hospital based purchasing, employment, training, oversight
- EMTALA
  - 1994 Hospital based ambulance is like the E.D.
  - 2003 The E.D. is at the closest appropriate hospital
- Adjunct to the services of the hospital
  - Personnel often work within facility
  - Paramedics can perform other duties

Public Utility and Franchise Model EMS

- Public Board of Directors
- Authority establishes parameters
  - Performance-based contract with private company for service
  - May assess penalties if parameters not met
  - Clinical sophistication

Public Utility Model
- Authority owns the system assets
- Authority bills for services
- Authority pays private company monthly fee

Franchise Model
- Private company bills, collects reimbursement and maintains assets
- Contract is more complex
EMS Provider Levels

- 1996 >40 levels of certification
  – Scopes of practice varied
- 2005 National EMS Scope of Practice Model*
  – Emergency Medical Responder (EMR)
  – Emergency Medical Technician (EMT)
  – Advanced Emergency Technician (AEMT)
  – Paramedic

*This is a national vision and far from reality. Multiple levels still exist.

Equipment and Supplies

- Equipment
  – Durability
  – Size
  – Cost
- Supplies
  – Must have a restock strategy that works 24/7/365
    • Hospital restocking
    • Central supply
  – Medications/Controlled substances

Take Home Points

- The EMS Physician should have familiarity with
  – Different delivery models for EMS and their pros and cons
  – How different models might be more suited for different types of communities
  – Tiered response
  – EMS Provider levels