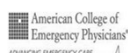


EMS Subspecialty Certification Review Course

Service Delivery Models

2025



1

ABEM EMS Core Content

2.4.5 Service Delivery Models

2.2.2 Design of System Components

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

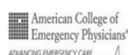


2

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.
- Discuss Equipment and Supply Chain issues associated with EMS systems



3

Ground Ambulance Design

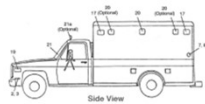
- National standards for U.S. ambulance design
 - *Federal specifications for the Star-of-Life Ambulance* (KKK-A-1822)
 - *Standard for Automotive Ambulances* (NFPA 1917)



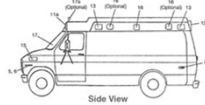
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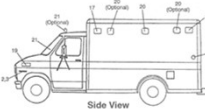
Ground Ambulance Design



Type I
Truck, cab-chassis
with modular
ambulance body



Type II
Van, integral cab-body
ambulance



Type III
Van, cab-chassis with
integrated modular
ambulance body



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Vehicles

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



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EMS Provider Levels

- Before 1996 > 40 levels of certification (all those regional demonstration projects)
 - Scopes of practice varied
- 2018 National EMS Scope of Practice Model
 - Emergency Medical Responder (EMR)
 - Emergency Medical Technician (EMT)
 - Advanced Emergency Technician (AEMT)
 - Paramedic



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Tiered Response

- More than one agency may be sent to the same incident
 - non-transport medical first-response unit (fire, police)
 - ambulance
- Dual/Simultaneous Response System:
 - non-transport + ambulance at the same time



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Service Delivery Models

- Fire Dept EMS
- Law Enforcement EMS
- Municipal EMS ("third-service")
- Private EMS
 - Licensing/Franchising
 - Public Utility Model
 - Hospital-Based EMS



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Fire Dept EMS

- Largest group of EMS providers
- Low frequency of fires -> Available to do EMS
- Infrastructure exists
 - Short response times
 - Cross training -> versatility, but \$\$ and skill dilution
- Because the infrastructure already exists, Fire Dept EMS is extremely cost effective
 - \$ to add medical equipment, EMS training, supervision, fuel/maintenance is comparatively minor



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Fire Dept EMS

- Pros
 - Job satisfaction, decreased burnout 2/2 work variety
 - Depth of resources
 - Rescue + Medical integration on scene
- Cons
 - Can't bill if they don't transport - *for now....*
 - Potential clash of roles of suppression/EMS/culture
 - In traditional model suppression, not medicine, is paramount
 - Tend to have 24 h shifts



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Law Enforcement EMS

- Infrastructure exists for short response times... but unlike fire depts w decreasing numbers of fires, LEO have a rising demand for service
- May be more of a viable option for smaller communities w lower demand levels for police response but need a certain number of LEO on duty to provide adequate community coverage



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Municipal EMS

- Most prevalent in urban/suburban settings
- Local government funds EMS as a separate agency
 - Can also be referred to as “third-service”
- Municipal EMS chief may report to
 - Head of the municipal gov
 - Public safety director
 - Public health director



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Municipal EMS

- Pros
 - Can focus on the single mission of medical care
 - Focused education
 - Efficiency
 - No competition of \$ with other service lines
 - Supervisors/managers more likely to have EMS-specific qualifications
- Cons
 - Legally, only police and fire must be gov funded
 - Need for integration w other public safety agencies



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Private EMS

- Private ambulance services contracts with community/gov
 - First response may be done by fire
 - Funded by patient or third-party payer
 - Fiscally responsible



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Private EMS

- Licensure: an empowered governmental unit can establish min standards; any ambulance service meeting the standards can provide service
- Franchising: like licensure except it limits the number of ambulance service providers and may designate exclusive operating areas



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Private EMS

- Public utility model
 - Designates a single ambulance service provider to provide emergency and non-emergency services
- Governmental unit:
 - does the billing
 - owns the capital equipment
 - pays a private company a monthly fee/fee per call to staff/manage the ambulances
- Medical director ideally should not be directly compensated by the company



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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



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Equipment and Supplies

- Equipment
 - Durability
 - Size
 - Cost (don't forget the education!)
- Supplies
 - Must have a restock strategy that works 24/7/365
 - Hospital restocking
 - Central supply
 - Medications/Controlled substances



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Question

- ☐ Which of the following statements are true about multi-tier response systems?
- A typical multi-tier response would consist of an ambulance staffed by providers at the paramedic and EMT levels.
 - First responders arrive on scene quickly and can rapidly transport critically ill or injured patients to the hospital.
 - Fire Departments are a poor choice as first responders since they are typically busy fighting fires and performing prevention activities.
 - In a Public-Private partnership, the Municipality could provide the first responders and the Private Service provides the transport unit.



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Question

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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