



A Brief History and Overview of EMS

Wisconsin EMS Medical Director's Course

EMS Overview - Objectives

Overall Objective

- Describe EMS Medical Director's and other health care providers' roles in process of EMS systems medical oversight

Enabling Objectives

- Describe role of the EMS medical director
- Discuss historical development of civilian EMS
- Discuss development of EMS in Wisconsin

Brief Overview of EMS

- EMS - the provision of health care outside of the hospital setting by personnel with varying levels of training
 - o Personnel are essentially physician extenders.
 - o Provide medical care under supervision of physician medical director.
 - o EMS providers include Emergency Medical Responder, EMT-Basic, Intermediate-Technician, Intermediate and Paramedic.

Brief Overview of EMS (cont.)

- Medical Direction required for Emergency Medical Responder, EMT-Basic, Intermediate Technician, Intermediate and Paramedic
- EMS is a continuum of care from illness or injury onset until hospitalization.
 - Illness and injury prevention will be important aspects of EMS care

Medical Director Roles

- Physician as patient advocate
 - Advocacy roles for the patient (first priority), EMS system and providers, health care facilities and the community
- Physician as team leader
 - Requires understanding of EMS relationships with other health care providers, health care facilities, and community agencies as they relate to patient care

Medical Director Roles (cont)

- Physician as legal component of the system
- Physician as key link integrating EMS to the local, regional, and state health care system
 - Leadership, consensus building, and political savvy are helpful attributes
 - Expectation that medical directors understand delivery and administration of EMS care

Definitions

- EMS System
 - Any specific arrangement of emergency medical care resources, facilities, personnel, equipment, and supplies designed to function in a coordinated fashion (local, regional, state or national)
- EMS
 - The provision of medical care in the out-of-hospital setting by trained personnel functioning under the supervision of the physician medical director

Definitions (cont)

- Medical Director
 - o The physician who has primary *responsibility* and the *authority* to provide medical oversight for all aspects of EMS in an effort to assure quality patient care
 - o May be responsible for a specific agency, an entire EMS system, and/or an educational program
 - o A single medical director should serve as the focal point for medical leadership for the agency/system as it relates to patient care

Physician Leadership

- Medical Director works in collaboration with others in the agency or system to provide medical oversight
 - o Nurses
 - o Physician assistants
 - o EMS personnel (educators, supervisors, etc)
- Many physician specialties need to be available to provide input into the EMS system for the system to function effectively; medical director acts as the liaison between EMS and the medical community

History of EMS Development

- Historical roots of EMS arose from lessons learned from military experience and the need to address the problems of civilian sudden cardiac arrest and major trauma
- Major involvement in early years by physician visionaries of EMS development
- Federal government provided programs and funds critical to the early growth of EMS

Military Contribution

- Military experiences instrumental in the development of EMS
 - First organized field care of treating and removing injured soldiers from the battlefield developed by Napoleon's chief surgeon, Jean-Dominique Larrey
 - American Civil War experiences lead to development of an extensive pre-hospital system including trained medical corpsman (providing treatment in the field), ambulances and rail transport bringing the injured to medical facilities



Military Contribution (cont)

- WWI – Thomas traction splint lead to decrease in morbidity and mortality due to leg fractures
- WWII – focused on the treatment and transport of those injured in combat
- Korean War – Advanced field treatment units (MASH) and helicopters first used
- Vietnam War – Refinement of techniques learned in Korea



The Early Days

- Modern pre-hospital care arises in response to need to treat cardiac arrest and vehicular trauma.
 - 1960's – development of CPR and defibrillation
 - 1966 – publication of "Accidental Death and Disability: The Neglected Disease of Modern Society" provides first significant look at the lack of quality in field and emergency department care
 - National Highway Traffic Safety Act of 1966 (NHTSA) established to address the prehospital needs of the trauma victim

The Early Days (cont)

- Paramedic programs developed by physician visionaries in several areas of US
 - Miami, Columbus, Portland, Seattle and Los Angeles in late 60s/early 70s
 - Public awareness of need spurred on by TV show "Emergency!"
 - As EMS programs continued to evolve in 70s and 80s physician involvement waned; trend is reversing



First Federal Recognition

- Federal government instrumental in EMS development since mid 70s
 - 1973 - Emergency Medical Services Act
 - Defined 15 components of an EMS system
 - DOT national curricula for EMTs and paramedics
 - Health and Human Services EMS Office established
 - Law renewed and amended in 1976 and 1979
 - **No** provision for medical direction

Emergency Medical Services Act

Included 15 components.

*Note the omission of Medical Direction.

- Manpower
- Training
- Communication
- Transportation
- Emergency Facilities
- Critical Care Units
- Public Safety Agencies
- Consumer participation
- Access to Care
- Patient Transfers
- Standardized Record Keeping
- Public Information and Education
- System Review and Evaluation
- Disaster Planning
- Mutual Aid

Changing Times

- Federal funding ends in 1981; replaced by Omnibus Budget Reconciliation Act
 - Shifts EMS oversight to states with funding coming from individual block grants
- EMS evolves over last two decades to a more “modern” definition of EMS
 - Emphasizes **medical direction**, protocols, medical dispatch, interfacility transport, and financing

“Modern” Definition of EMS

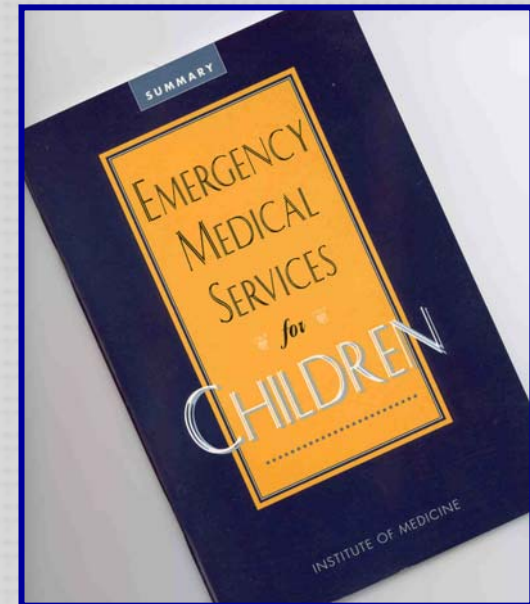
- **Medical Direction**
- Protocols
- Financing
- Training
- Communications
- Prehospital Transport
- Interfacility Transport
- Receiving facilities
- Specialty Care units
- Dispatch
- Public Information and Education
- Audit, Quality Improvement
- Disaster Planning
- Mutual Aid

Federal Involvement

- NHTSA (National Highway Traffic Safety Administration)-EMS Division is very active in promotion, development and research in EMS
 - o Periodic revision of national curricula for EMT- Basic, Intermediate, Paramedic and medical direction
 - o Special task forces
 - o Education (interface of EMS and managed care organizations)
 - o Research activities
 - o Public health initiatives

Federal Involvement (cont)

- Maternal Child Health Bureau EMS-C (C=Children) programs
 - o Recognition in 1980s that EMS management of pediatric patients is unique
 - o Federal legislation (1985) allows development of EMS-C projects/funding
 - o System development
 - o Research
 - o Targeted issues and education



Federal Involvement (cont)

- Focus on pediatric issues has improved EMS personnel education
 - o Pediatric Education for Prehospital Professionals (PEPP) rolled out in 2000
- U.S. Fire Administration
 - o Actively supports EMS activities in the fire service
 - o Resource documents available via web site
 - o National Fire Academy also has resource documents and courses available for fire-based EMS programs

Professional Organizations

- Physician organizations with interest and impact on EMS activities
 - o Organizations with a focus on EMS
 - National Association of EMS Physicians (NAEMSP)
 - National Association of State EMS Directors
 - o Other organizations with an interest:
 - American College of Emergency Physicians (ACEP)
 - American Academy of Emergency Medicine (AAEM)
 - Society for Academic Emergency Medicine (SAEM)
 - American College of Surgeons (ACS)
 - American Academy of Pediatrics (AAP)

Wisconsin History

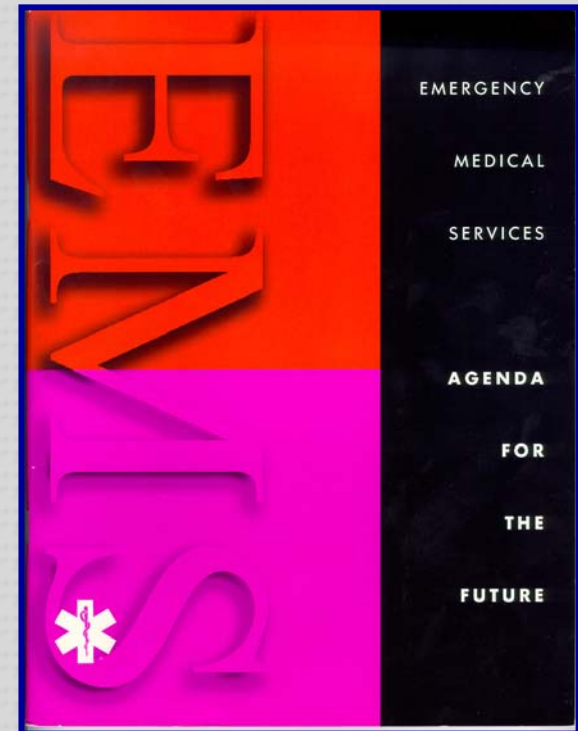
- The Wisconsin Experience
 - o State EMS Section created in 1968
 - o First nationally recognized training course for EMTs held in Wausau as test site for the new DOT curriculum (1969)
 - Joseph D. 'Deke' Farrington, physician coordinator for the course, was an EMS pioneer who developed the original 81 hour curriculum, promoted the use of extrication, and invented the spine board

Wisconsin History (cont.)

- NHTSA review/report on EMS in Wisconsin 1990-91 resulted in legislative action in 1993-94.
Action includes:
 - o Creation of State EMS Board
 - o Creation of State EMS Physician Advisory Committee (PAC)
 - o Appointment of State EMS Medical Director (Dr. Joseph Darin)
- State recognition of the importance of EMS by promotion to **Bureau** status
- Tremendous growth in Wisconsin EMS oversight and direction since 1993

EMS Agenda for the Future

- A multi-organizational process to define the direction of EMS for the turn of the century
 - Sponsored by NHTSA and Maternal Child Health Bureau
 - Coordinated by NAEMSP and National Association of State EMS Medical Directors
 - Identification of EMS attributes as defined by the agenda



EMS Agenda for the Future

- Integration of Health Services
- EMS Research
- Legislation and Regulation
- System Finance
- Human Resources
- **Medical Direction**
- Education Systems
- Public Education
- Prevention
- Public Access
- Communications Systems
- Clinical Care
- Information Systems
- Evaluation

Summary

- Medical Director is one of the critical components of any EMS system
- EMS has its roots in *military* experience and the need to address *civilian* cardiac arrest and trauma
- Important Federal initiatives (NHTSA-1966 and EMS Systems Act – 1973) provide education, funding, and growth
- TV series, “Emergency!” raises public awareness

Summary (cont.)

- “Modern” EMS evolved in 1980s-90s
- EMS oversight in Wisconsin experienced tremendous growth following NHTSA review in 1990