

## **EMS Course Learning Objectives:**

Upon successful completion of this course, students will be able to:

1. Discuss historical events that lead to EMS systems development and describe their basic building blocks/attributes.
2. Discuss the role of federal and state agencies within EMS systems, describe the functional components of EMS systems and understand the National Highway Traffic Safety Administration (NHTSA) statewide EMS evaluation components.
3. Describe historical factors that influenced the development of state/regional EMS systems and discuss their components, responsibilities and challenges.
4. Discuss development of our nation's trauma system, describe key concepts behind inclusive trauma care system, explain why trauma is a public health problem, explain importance of injury prevention and describe continuum of trauma care through rehabilitation.
5. Discuss how emergency departments (EDs) and EMS systems are related, describe how EDs are categorized and organized, recall Emergency Medical Treatment and Labor Act (EMTALA) basics and explain importance of communication between the ED and EMS system.
6. Define medical oversight, explain importance of physician accountability and describe the aspects of online and offline medical direction including protocol development, quality assurance and education.
7. Explain the different EMS system models, describe integrated process and aspects of field response, explain integration of the EMS system with community and medical community and describe infrastructure support services functions.
8. Discuss the major factors that affect the cost of providing EMS services, explain cost versus outcome and describe various funding sources.
9. Recall components of communications plan, describe various means of EMS system communication, discuss importance of offline and online communications and describe technology/equipment that have become the foundation for EMS communication.
10. Explain the history of EMS dispatch, describe basic configuration of EMS communication systems, recall components of an EMS dispatch program and discuss enhancements of communications such as automatic number/location/vehicle identification.
11. Explain the methods and components of EMS record documentation, describe two keys to quality documentation and discuss the aspects of quality management of documents and legal/security matters.
12. Describe the history and development of the ambulance and development of the ambulance industry, discuss development of EMS training and equipment, explain the use of response times and system status management to improve system operation.
13. Explain why patients are transferred to other facilities, describe the risks related to patient transfer and discuss the logistic of patient transfer.
14. Recall the indications, goals, and risks of air medical transport.
15. Explain the impact of Emergency Medical Services for Children (EMSC) on health and welfare of children in the United States.
16. Describe the challenges affecting rural EMS systems.
17. Describe the differences between a disaster and a mass-casualty incident, list the different types and phases of a disaster, discuss role of triage in a disaster and apply triage tools, explain what is involved in the development of an EMS disaster plan, recall basic tenets of the incident command system and explain the importance of communication in a disaster.
18. Recall the medical director's responsibility at mass gatherings, describe the level of care and staffing considerations at mass gatherings, list equipment/medications/treatment facilities/patient transport that are used, discuss environmental elements, discuss access to care and elements of communications and describe prospective quality management.
19. Discuss the use of weapons of mass destruction (WMD) throughout history, define nuclear/biologic/chemical agents, recall current federal preparedness initiatives, describe difference between WMD incident and other mass-casualty incidents and discuss EMS considerations for radiologic incidents.
20. Recall components of Operational EMS programs including health maintenance, care under fire, and personal protective equipment.
21. Discuss the prior relationships, reform of, benefits to, and barriers between public health and EMS.

22. Explain basics of clinical research, list 6 D's of outcome measurements, describe challenges in conducting research and recall categories/aspects of research design.
23. Describe the components of the national EMS Education Agenda for the Future and explain the characteristics of an EMS education program.
24. Define the different types of EMS providers and describe their roles, define role of EMS medical directors, describe career opportunities and work settings for EMS providers, explain future challenges surrounding EMS staffing and explain why data for EMS research should drive the operation of the EMS system.
25. Describe the components of an EMS organization's health and safety program, describe occupational medical program for occupational injuries and illnesses, discuss health and safety programs/plans for blood-borne pathogen exposure/tuberculosis exposure/respiratory protection/workplace violence prevention/fire safety/ergonomics, and explain some occupational issues specific to women in EMS.
26. Discuss the two basic types of law in the judicial system, explain the overall liability risks of EMS providers and physician directors. Describe patient transport issues and how EMTALA affects EMS.
27. Explain the basic components of EMTALA including medical screening examination, stabilization and transfer requirements.
28. Explain reasoning behind Southern Arizona EMS protocols and standing orders treating: (1) hypoglycemia - administering glucose, (2) allergic reactions - administering epinephrine, (3) chest pain - administering aspirin and obtaining an EKG, (4) cardiac arrest – providing cardiopulmonary resuscitation and utilizing an automated external defibrillator, (5) respiratory distress and asthma – administering oxygen and albuterol, (6) central nervous system disease such as seizure/stroke/transient ischemic events – administering oxygen and obtaining finger stick blood sugars, (7) trauma – providing basic first aid, basic life support and providing appropriate spinal immobilization, (8) dead on scene - do not resuscitate, (9) patient refusals – contacting base hospital, University of Arizona Police Department and Tucson Fire Department and intoxication/altered mental status – obtaining finger stick blood sugars.
29. Describe University EMS policies including: leadership organizational chart, ASUA service bylaws, online medical direction, EMT scope of practice, communication, infection control, patient care record keeping, standing order compliance, quality improvement plan, problem resolution, fleet policy and safety, drug box contents and security.