Handbook for EMS Medical Directors

Section 4: Agency Oversight
Objectives

After completing this section, the medical director will be able to:

1. Understand the components of agency and provider oversight
2. Identify the role of protocols and on- and off-line medical direction
3. Explain the role of the medical director in the field setting
After completing this section, the medical director will be able to:

4. Understand the *National EMS Scope of Practice Model* and related provider levels

5. Understand the *National EMS Educational Standards*

6. Identify associated activities found in performance based organizations
After completing this section, the medical director will be able to:

7. Identify applicable sources for EMS industry related health and safety regulations and standards
Objective 4.1
Understand the components of agency and provider oversight
• A medical director should provide:
  – Medical leadership
  – Agency medical oversight
  – Medical related education and training
  – Coordination of medical related standard operating procedures and protocols
  – Medical related emergency preparedness and disaster care
• A medical director should provide continued:
  – Implementation of medical related best practices
  – Medical related quality improvement
  – Provider health and safety measures
  – Implementation of medical related and evidence based best practices
  – Research activities related to efficiency and efficacy of out-of-hospital patient care practices and patient outcomes
Objective 4.2

Identify the role of protocols and on- and off-line medical direction
• Protocols may be developed and/or mandated by state or regional oversight entities
  – Protocol modifications by the local EMS agency’s medical director may or may not be permitted
  – Systems may use locally developed protocols which can be created solely by the medical director or in collaboration with an agency cross functional committee and/or local medical community
• An agency’s new medical director will generally choose to revise existing protocols rather than introducing a completely new protocol set
  – This may prove advantageous when limited advances in patient care standards are needed

• All protocols require regular review and updates to reflect evidence-based changes in patient standard of care
• Standing orders are more specific and are usually included within a protocol when a delay in treatment could be detrimental to the patient’s medical condition

  – Examples: Defibrillation of a patient in ventricular fibrillation, advanced airway placement in an apneic patient, medication administration for a cardiac arrest patient
On-line medical direction is the management of patient care by physicians through contact with EMS providers by radio, phone, or other communication devices.

- EMS providers may seek on-line medical direction to obtain orders, perform a procedure, or administer a drug that requires real-time approval.
• This communication allows for direct consultation on specific or unusual patient care situations and prepares the receiving facility for the incoming patient
  – This type of verbal communication may not always be given by the agency’s medical director but by a physician at a designated medical facility
• Off-line medical direction involves the development, dissemination and enforcement of written instruction
  – This includes administrative promulgation and enforcement of accepted standards, including protocols and standing orders
• Off-line medical direction can be accomplished through both prospective and retrospective methods
  – Prospective methods include:
    • Training
    • Provider testing and certification
    • Protocol development
    • Operational policy and procedures development
    • Legislative activities
• Off-line medical direction continued
  – Retrospective activities include:
    • Medical audit and review of care
    • Process improvement
    • Direction of remedial education
    • Limitation of patient care functions
Objective 4.3

Explain the role of the medical director in the field setting
Medical directors should routinely participate in field responses, making first-hand contemporaneous patient care evaluations of the EMS system and providers

– In some EMS agencies, the experienced and properly trained medical director actively participates in out-of-hospital patient care
• Medical directors need to have proper identification and appropriate personal protective equipment when participating in field operations.
• The incident command system (ICS) is a standardized approach to manage emergency incidents and major events.

• When participating with field operations, it is imperative the incident command system is understood and followed.
  – This helps the medical director contribute and not become a liability at the incident.
• When the medical director arrives on an emergency scene, they must immediately report to the command post
  – Properly trained medical directors can be of great value on the scene when fully integrated into the incident command system
• The *Handbook* contains information on patient triage systems used in the field setting, as well as incident command functional groups or geographic divisions typically encountered by the medical director.
Objective 4.4

Understand the *National EMS Scope of Practice Model* and related provider levels
• The *National EMS Scope of Practice Model (Scope of Practice)* divides the National EMS Core Content into four established provider levels, each with minimum skill and knowledge standards
The adoption of the *National EMS Scope of Practice Model* is not uniformly accepted by all states.

- In states where the *Scope of Practice* is not accepted, there may be other governmental levels (state, regional or locality) that establish and define the scope of practice for EMS providers.
• Adding to this variability not all states utilize NREMT certification exams, opting to develop their own testing for one or all their certification or licensure levels

  – In these situations, a wide variety of provider titles and scope of practice definitions can exist
• The medical director should become familiar with the current standards within their state

• The medical director must have knowledge of the EMS provider levels and associated skill sets within their agency
• The following descriptions are summaries from the *Scope of Practice* for the four established provider levels
  – Emergency Medical Responder (EMR)
  – Emergency Medical Technician (EMT)
  – Advanced Emergency Medical Technician (AEMT)
  – Paramedic
• The EMR possesses basic knowledge and skills necessary to provide lifesaving interventions while awaiting arrival of additional EMS response resources
  – Perform basic interventions with minimal equipment such as basic patient assessment, oxygen administration, splinting, bandaging, and spinal immobilization
• The EMT possesses the basic knowledge and skills necessary to provided patient care and transportation
  – EMTs perform interventions with the basic equipment typically found on an ambulance
• EMT incorporates the EMR skill level but has additional training related to patient assessment skills, gaining access to patients in various situations, ambulance operations, and have clinical experience during their education program.
In some states the EMT may administer or assist with the administration of certain medications, utilize emergent airway adjuncts, and monitor existing intravenous fluid administration.
• The AEMT possesses all the knowledge and skills of the EMT
• The AEMT can perform skills such as intravenous or intraosseous fluid administration, certain advanced airway adjuncts, specific emergency care medications, and has a greater depth and breadth of clinical procedure education
• The paramedic possesses complex knowledge and skills necessary to provide advanced levels of patient care and transportation
The paramedic curriculum incorporates AEMT knowledge and skills but has additional hours of didactic and clinical requirements:

- Hourly requirements vary between states and programs.
- Paramedics usually have approximately one thousand additional educational hours above the EMT.
• The paramedic can be expected to perform advanced procedures such as:
  – Endotracheal intubation and surgical airway techniques
  – Intravenous and intraosseous fluid administration
  – Medication administration related to several conditions
• Advanced procedures performed by the paramedic continued:
  – Cardiac rhythm interpretation including 12-lead electrocardiograms, defibrillation and synchronized cardioversion
  – Other approved advanced procedures
Objective 4.5
Understand the National EMS Educational Standards
• A medical director’s responsibilities includes oversight of EMS agency’s educational programs
  – This may range from initial education of new providers to continuing education programs for incumbent providers
• NHTSA has developed new *National EMS Educational Standards*

  – These new standards will replace older EMS training curriculums and increase each provider level standards for educational course development

• The new standards will be used for development of new EMS textbooks by various publishers
The *National EMS Educational Standards* define competencies, clinical behaviors, and judgments that must be met by entry-level EMS personnel to meet practice guidelines defined in the *National EMS Scope of Practice Model*.
• Medical directors are encouraged to engage with their state’s EMS office to determine if these national standards will be adopted and identify associated implementation timelines
• EMS agencies providing certification courses will often need a physician course director
  – Each certification course will have its own set of defined physician oversight responsibilities
  – The medical director may want to also agree to serve in this capacity
• The medical director needs to be involved in the development and approval of all agency-based continuing education initiatives
  – Ensure the accuracy and validity of the courses’ medical content
  – Address individual areas of concerns or agency trends
• Involvement in agency-based continuing education initiatives continued
  – Incorporate findings from the agency’s quality improvement initiatives
  – Provide a seamless transition from the agency’s quality improvement efforts to its education programs
• Continuing education should be designed to meet three main objectives:
  – Provide exposure to current trends and evidence-based advances in patient care
  – Review areas of patient assessment and management that are not frequently used
  – Meet certification or licensure renewal requirements of the provider
• In addition to state certification or licensure, providers may also maintain certifications in various other training courses such as:
  – Advanced Cardiac Life Support (ACLS)
  – Pediatric Advanced Life Support (PALS)
  – International Trauma Life Support (ITLS)
  – Prehospital Trauma Life Support (PHTLS)
  – Critical Care Emergency Medical Transport Program (CCEMTP)
• Medical directors may be requested to evaluate or support these courses and will need to have a familiarization with training courses and requirements
• Medical directors need to work collaboratively with the agency’s leadership to ensure educational and training requirements fit local needs and resources
• The medical director has a role in verifying provider’s skill set competencies
  – Verified by assessments during providers’ initial credentialing process and at periodic subsequent assessments
  – Assessments involve cognitive, psychomotor, and affective domains
  – Low frequency but high criticality skills require frequent competency evaluations and educational support
• The medical director’s oversight of competency based evaluations may be identified in your agency’s affiliation agreement, or may be a state or local EMS regulatory requirement

  – The task of competency verification can be accomplished in conjunction with your agency’s training or operational staff
Objective 4.6
Identify associated activities found in performance based organizations
• By working cooperatively with agency leaders the medical director can provide a team approach to manage patient care related quality assessments
  – Agencies must be routinely evaluated for strengths, weaknesses, opportunities and threats (SWOT)
• Cooperative approach with agency leaders continued
  – Policies and procedures need to be routinely revised to reflect best practices in the industry
  – Agency processes, equipment, and supplies should be routinely evaluated and considered for appropriate revisions and replacement
• Quality improvement practices need to be integrated into daily EMS operations
• The medical director needs to be involved in development and monitoring of quality management
• Quality improvement related performance objectives help to:
  – Evaluate an agency’s ability to meet its objectives
  – Develop a team approach among EMS managers, supervisors, educators, providers, and external healthcare community members

  • All must work together to accomplish quality management initiatives
• Quality improvement may be:
  – Prospective
  – Concurrent
  – Retrospective

• Quality improvement programs need to utilize all these components
• Quality improvement activities should not be designed to be punitive
  – Activities need to focus on organizational improvements
  – Activities should be conducted to educate providers and ultimately enhance patient care delivery
• Prospective quality improvement may be in the form of primary education of EMS personnel, continuing education, periodic skill evaluation, and training programs
• This type of improvement is seen as a front end approach to improvement
• Concurrent quality improvement is achieved through direct observation of performance of EMS providers at the time of service provision
  – Most EMS agencies have a chain of command that includes EMS supervisors or officers that conduct direct oversight and leadership of providers
• Direct supervision or oversight on the scene by a medical director or EMS officer is an example of concurrent QI
• Retrospective quality improvement may be in the form of documentation, case reviews, or audits

• Involves activities that look back to see if quality service was provided
  – Patient care record audit for completeness and accuracy
  – Patient response surveys
  – Response time studies
The Health Insurance Portability and Accountability Act (HIPAA) of 1996 enacted federal protections for personal health information.

- Some covered entities may not recognize EMS as a vital link in the patient’s progression through the health care system.
- EMS records need to be linked with hospital records to support patient outcome data analysis.
• Records used in case review activities must have all nonessential information redacted

• The medical director can assist in facilitating the agency’s quality improvement activities with receiving facilities
  – Multidimensional case reviews with providers, emergency department staff, and agency leaders will assist in discovering potential quality improvement opportunities
• Agency evaluation using performance measures can be imperative in overall quality and effectiveness assessment of an EMS agency

• A performance measure is a quantifiable criterion that relates to program quality
  – An ideal measure is one that is not only quantifiable, but one that has been shown to make differences in patient outcomes
• Clinically relevant “best practices” approach should be utilized related to performance measures until true evidence is accumulated

• The *Handbook* contains examples of performance measures from several professional associations
• Benchmarking is the practice of setting targets for a particular function by evaluating other related performers, either within or outside an organization

– Unfortunately there are tremendous gaps in data collection, quality improvement, and benchmarking practices in the EMS industry
• Benchmarking continued
  – Information gaps have contributed to EMS strategies, ranging from agency model development to patient treatment activities, having questionable benefit in overall patient outcomes
  – Many EMS practices have evolved from tradition or non-conventional application of in-hospital care modalities
• To address the industry information gap, data elements need to be standardized
  – Supports comparison and linkage of EMS databases at all levels (local, regional, state and federal)
• NHTSA, in coordination with the Health Resources and Services Administration, has developed the National EMS Information System (NEMSIS)
  – A national EMS database and data definitions is included
• The majority of states have agreed to participate with the project but their implementation timelines vary

• The medical director should contact their state EMS oversight agency for additional information
• As the EMS industry continues to evolve, performance documentation will be critical to demonstrate system effectiveness

  – In the interim, medical directors should establish collaborative relationships with other medical directors in their region and state.
  
  – Medical directors may find value with establishing relationships with other similar size and demographically equivalent agencies
• Closely related to benchmarking activities is best practices
• Researching best practices can aid a medical director in decision making
  – Can assist the medical director in implementing new initiatives with fewer complications, or in refining existing practices
• There are a multitude of sources where a medical director can research EMS industry best practices
Accreditation is a mechanism to recognize the agency’s efforts and accomplishments.

- Benefits are numerous and include positive public perceptions, an external validation for local officials and the medical community that the agency underwent careful review, and recognition of agency efforts.

This is another area the medical director must cooperatively work with agency leadership to achieve and maintain this goal.
• Research activities in EMS are progressing, but have historically been recognized as one of the weaknesses in refining patient care and systems design in EMS

  – Several EMS research initiatives related to medications, equipment and treatment modalities are underway and have the potential to influence the EMS patient care delivery arena
• Utilize the results of evidenced based EMS research to evaluate and adjust clinical practices, equipment usage, and service delivery

• Use journal reviews and continuing education opportunities to stay abreast of developments in research and patient care

• Consider involvement in appropriate research studies and pilot programs
Objective 4.7

Identify applicable sources for EMS industry related health and safety regulations and standards
• Be an advocate for health and safety issues
• OSHA provides workforce oversight either directly through the federal organization or through an approved state program
  – Medical directors should become familiar with applicable OSHA standards for EMS and have knowledge of their state’s program if applicable
The National Fire Protection Association (NFPA) publishes EMS related industry standards

- NFPA 1026: *Standard for Incident Management Personnel Professional Qualifications* addresses personnel’s minimum requirements for performing roles within an all-hazard incident management system

- Medical directors may also want to become familiar with other applicable NFPA standards
• The medical director needs an appreciation for the physical and mental toll extended operations can have on emergency workers

  – NFPA 1584: *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises* identifies the minimum criteria for establishing a rehabilitation process
• Personal safety equipment is vital to protection and safety against exposure to infection
• Proper application of personal protective equipment (PPE) and body substance isolation (BSI) is a cornerstone for medical director and EMS providers’ safety
  – Appropriate utilization of BSI for the given situation should be a mandate for EMS providers
• The *Handbook* contains specific examples and industry standards related to personal protective equipment