

**EMS as a Medical Subspecialty:
What's Next?**

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Conflict of Interest Disclosure

- Author Conflicts of Interest
 - **D. Cone: None**
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 - **D. Perina: None**



Objectives

- Guide to planning for the transition to ACGME-accredited EMS fellowship programs
- Recognize substantial changes in EMS fellowship programs that will be required
- Understand basic features of the new, expanded EMS fellowship core content and curriculum

Brief History

- Mid-1990s task force led by Harvey Meislin on behalf of ABEM
- July 31, 1997: ABEM elects not to pursue
 - Too administrative
 - No unique body of knowledge
 - Lack of scientific underpinnings of proposed subspecialty
- 2001: NAEMSP's EMS Physician Certification Task Force created, led by Jon Krohmer, to explore possibility of NAEMSP offering certification

Institute of Medicine: June 2006

- The Future Of Emergency Care In The United States Health System



- 1. Hospital-Based Emergency Care: At the Breaking Point
- 2. **Emergency Medical Services at the Crossroads**
- 3. Emergency Care for Children: Growing Pains

IOM EMS Report: p, 7



- The committee believes that physicians who provide medical direction for EMS systems should meet standardized minimum requirements for training and certification that are reflective of their responsibilities..."
- "... The specialty of emergency medicine currently offers 1- and 2-year fellowships in EMS to residency-trained emergency physicians, but there is no recognized subspecialty of EMS. Therefore, the committee recommends that **the American Board of Emergency Medicine create a subspecialty certification in EMS.**"
 - Emphasis original **Recommendation 4.4**

Second Attempt for Recognition

- Aug 2006: NAEMSP approached ABEM with IOM recommendation. Given information on how to write draft application
- 2007: NAEMSP and ACEP EMS committee form joint task force to write draft application
 - Bill Jermyn as co-chair, then Bob Bass
- 2008 ABEM attends task force meetings to discuss application

Final Journey to Subspecialty Recognition

- First draft to ABEM October 2008
- Substantially revised by Sandy Bogucki and Debra Perina January 2009
- First review by ABEM Board February 2009 with final draft submitted May 2009
- ABEM submitted application to ABMS in August 2009
- ABMS final approval of the application September 2010 by unanimous vote

Purpose of the EMS subspecialty

- "The purpose of subspecialty certification in EMS is to standardize physician training and qualifications for EMS practice, to improve patient safety and enhance the quality of emergency medical care provided to patients in the prehospital environment, and to facilitate further integration of prehospital patient treatment into the continuum of patient care."

What is the EMS subspecialty?

- Emergency Medical Services is a clinical specialty
 - Includes the care of patients in all environments outside of traditional medical care facilities including clinics, offices, and hospitals until arrival to a definitive medical care facility
 - Includes evaluation and treatment of acute injury and illness in all age groups, planning and prevention, monitoring and team oversight

Curriculum Development

- Outdated (1994) core content and fellowship curriculum existed, but minimal clinical information
- So the mission was:
 - write a clinical EMS fellowship curriculum
 - capture our work in clinical terms
- Began with a new EMS Core Content
- Developed outline and recruited writers
- Focused on
 - Describing educational goals and objectives of fellowship
 - Using educational and clinical verbs to describe
 - Goals and objectives
 - Learning activities
 - Evaluation and assessment methods
 - Types of evaluators

The Final Product in Application

- Describes in broad terms the curricular goals and objectives, evaluation, and assessment methods for fellowship training in EMS
- Details the breadth, uniqueness, and complexity of an EMS fellowship curriculum
- Based on the components of the Core Content for EMS Medicine

Curriculum Format



- Four major headings
 - Clinical Aspects of Prehospital Medicine
 - Medical Oversight of EMS
 - Quality Management and Research
 - Special Operations
- Intentionally mirrors the four volumes of the NAEMSP text “Emergency Medical Services: Clinical Practice and System Oversight”

Curriculum Format

- Clinical Aspects of Prehospital Medicine
 - Time/Life Critical Events
 - Injury
 - Medical Emergencies
 - Special Clinical Considerations
- Medical Oversight of EMS
 - Medical Oversight
 - EMS Systems
 - EMS Personnel
 - System Management

Curriculum Format

- Quality Management and Research
 - Quality Management
 - Research
- Special Operations
 - Mass Casualty Management
 - Chemical/Biological/Nuclear/Explosive (CBRNE)
 - Mass Gathering
 - Disaster Management
 - EMS Special Operations

Sample Curriculum Element

1.1 Time/Life Critical Events

Goals and Objectives:
At the completion of fellowship training, the EMS physician will be competent to:

1. Recognize patients in the prehospital environment with time/life critical events
2. Perform procedures necessary for patient stabilization and treatment in the prehospital environment
3. Assess and manage the airway in the prehospital environment
4. Assess and manage breathing through physical examination, measurement of oxygen saturation and end-tidal CO₂ monitoring
5. Assess and manage circulation and delivery of medication
6. Assess and manage the differential diagnosis to find and treat reversible causes of time/life critical events

Evaluation and Assessment Methods:

1. Direct observation of patient assessment and treatment skills in the prehospital setting by program director or faculty supervisor
2. Structured patient simulations
3. 360° feedback from faculty, allied health personnel, patient
4. Retrospective chart review

ACGME Accreditation of Training Programs

- Draft program requirements in ABMS application
- RRC-EM finalizes ACGME program requirements
- RRC-EM develops Program Information Forms (PIF)
- Site visits and review of existing programs begin
- Review of applications for new programs

How does the ACGME expect me to use the program requirements?

- Appendix G of the EMS application: Proposed ACGME Program Requirements for Graduate Medical Education in Emergency Medical Services is an informal draft
- Based on ACGME "common requirements" for all GME programs
- Very similar to EM residency program requirements

How does the ACGME expect me to use the program requirements?

- An EMS fellowship program must
 - Prepare physicians as practitioners, educators, researchers, and administrators capable of practicing EMS in academic and clinical settings
 - Provide physicians with proficiency in managing the breadth of clinical conditions, involving patients of all age ranges with the broadest possible spectrum of emergency illnesses and injuries encountered by EMS systems in non-traditional health care settings
 - Emphasis is placed on initial identification and treatment of emergency conditions with limited resources in uncontrolled circumstances

Fellowship Goals and Objectives

- Must teach the basic skills and knowledge of EMS practice
- Must provide progressive responsibility for and experience in the management of clinical problems in the prehospital environment

Expected Outcome

- Fellows will develop a satisfactory level of clinical maturity, judgment, and technical skill that will, on completion of the program, allow them to pursue independent practice in EMS.

Fellowship Requirements

- Prerequisite training for entry into fellowship: satisfactory completion of an ACGME-accredited residency program
 - Fellowship program directors may consider a residency graduate from any ACGME accredited program, not just emergency medicine
- Minimum 12 months fellowship
- Fellowship must be associated with an ACGME-accredited residency program in emergency medicine

Fellowship Institution

- One sponsoring institution must assume ultimate responsibility for the program
- The sponsoring institution and the program must ensure that the program director has sufficient protected time and financial support for his or her educational and administrative responsibilities to the program

Fellowship Institution

- Highly desirable that program structure include the participation of a medical school
- Programs in EMS should be based at a primary hospital which serves as a base station hospital with regular communications with EMS providers
- Majority of didactic and clinical experiences should take place at primary clinical site
- Program must develop an affiliation with another site to provide fellows with any clinical experiences that are unavailable at the primary clinical site/sponsoring institution

Fellowship Institution

Consultants from appropriate medical specialties

- Disaster and mass casualty incident management
- Mass gatherings
- Resuscitation
- Critical care
- Air medical services
- Pediatrics
- Toxicology
- Occupational medicine
- Psychiatry
- Pulmonary medicine
- Biostatistics
- Epidemiology
- Public health
- Cardiology
- Infectious disease
- Gastroenterology
- Neurology
- Ophthalmology
- Pharmacology,
- Trauma surgery
- Forensics
- Hazardous materials

Fellowship Director

- Must be a single program director with authority and accountability for the operation of the program
- Program director should continue in his or her position for a length of time adequate to maintain continuity of leadership and program stability

Fellowship Director - Qualifications

- Qualifications must include:
 - Requisite specialty expertise and documented educational and administrative experience acceptable to the Review Committee
 - Current certification in the specialty by ABEM, or specialty qualifications that are acceptable to the Review Committee
 - Current medical licensure and appropriate medical staff appointment
 - Certification in EMS or suitable equivalent qualifications as determined by the Review Committee

Fellowship Director - Duties

- Must administer and maintain an educational environment conducive to educating the fellows in each of the ACGME competency areas
 - Oversee and ensure the quality of didactic and clinical education in all sites that participate in the program
 - Approve a local director at each participating site who is accountable for fellow education
 - Approve the selection of program faculty as appropriate
 - Evaluate program faculty and approve the continued participation of program faculty based on evaluation
 - Monitor fellow supervision at all participating sites

Fellowship Director - Duties

- Duties
 - Prepare and submit all information required and requested by the ACGME
 - Provide each fellow with documented semiannual evaluation of performance with feedback
 - Provide verification of fellowship education for all fellows, including those who leave the program prior to completion
 - Implement policies and procedures consistent with the institutional and program requirements for fellow duty hours and the working environment, including moonlighting

Fellowship Faculty - Qualifications

- At each participating site, there must be sufficient faculty with documented qualifications to instruct and supervise fellows at that location
- The faculty must:
 - Devote sufficient time to educational program to fulfill their supervisory and teaching responsibilities
 - Demonstrate strong interest in education of fellows
 - Administer and maintain an educational environment conducive to educating fellows in each of the ACGME competency areas
 - Have current certification in the specialty by ABEM or possess qualifications acceptable to Review Committee

Fellowship Faculty - Qualifications

- Must be minimum of two EMS faculty who each devote a minimum of five hours per week of direct teaching time to fellows and whose practice makes them available for consultation by fellows
- Faculty must be certified in EMS or possess suitable equivalent qualifications as determined by the Review Committee
- Must possess current medical licensure and appropriate medical staff appointment
- Non-physician faculty must have appropriate qualifications in their field and hold appropriate institutional appointments

Fellowship Faculty - Duties

- The faculty must
 - Establish and maintain an environment of inquiry and scholarship with an active research component.
 - Regularly participate in organized clinical discussions, rounds, journal clubs, and conferences
- Some members of the faculty should demonstrate scholarship by one or more of the following:
 - peer-reviewed funding
 - publication of original research or review articles in peer-reviewed journals, or chapters in textbooks
 - publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings
 - participation in national committees or educational organizations
- Faculty should encourage and support fellows in scholarly activities

Fellowship Resources

- Resources must be available to support provision of a clinical experience in adult and pediatric medical transports in all types of settings outside of traditional medical care environments
- These services must be organized and provided at the primary clinical site:
 - An emergency service for both adult and pediatric patients, adult and pediatric inpatient facilities, and adult and pediatric intensive care facilities
 - Disaster planning and response programs
 - Two-way radio communications between the primary hospital and surrounding medical transportation services for the purpose of provision of online medical direction
 - Equipment and means of transportation for the fellow to provide prehospital patient care

Fellowship Resources

- Must provide fellow with educational experiences in a variety of EMS systems including free-standing, fire-based, governmental, and for-profit services.
- Must provide fellow with experience in air medical evacuation and interfacility transportation service
- Must provide fellow with experiences in administrative components of an EMS system to determine functioning, designs, and processes to ensure quality of patient care in the prehospital setting

Fellowship Educational Program

- Curriculum must contain the following educational components
 - Overall educational goals for the program
 - Competency-based goals and objectives
 - Regularly scheduled didactic sessions
 - Delineation of fellow responsibilities for patient care
 - Progressive responsibility for patient management
 - Supervision of residents over continuum of program

Fellowship Educational Program

- Minimum of 12 months of clinical experience as the primary or consulting physician responsible for providing direct patient evaluation and management in prehospital setting as well as supervision of care provided by all allied health providers in prehospital setting
- Direct experience in evaluating and managing patients in prehospital setting with acutely ill and injured patients of both adult and pediatric ages
- Provide online medical direction of patient care by EMS personnel

Fellowship Educational Program

- Experience in an emergency communications center and a public safety answering point utilizing emergency medical dispatching guidelines
- Provide online medical direction for air medical services
- Experience with regional and state offices of EMS and other regulatory bodies that impact the care of patients in the prehospital setting

Fellowship Educational Program

- Opportunity to maintain primary board skills during training
 - May not **require** fellows to provide more than 12 hours per week of clinical practice not related to EMS
- Opportunity to participate in air medical transports including supervision of air medical crews during medical transports
- Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as application of this knowledge to patient care

Fellowship Educational Program

- Must have a curriculum that includes the following academic and clinical content:
 - Clinical manifestations, differential diagnosis, and management of acutely ill and injured patient in the prehospital environment
 - Provision of medical care in mass gatherings
 - Disaster planning and response
 - Procedures and techniques necessary for stabilization and treatment
 - Experimental design and statistical analysis of data as related to EMS clinical outcomes and epidemiologic research

Fellowship Educational Program

- Must have a curriculum that includes the following academic and clinical content:
 - Quality improvement and patient safety
 - Models, function, management, and financing of EMS systems
 - Oral and written communication skills and teaching techniques
 - Principles of epidemiology and research methodologies in EMS
 - Forensic response issues
 - Public safety answering points, dispatch centers, emergency communication centers operation
 - Medical oversight

Fellowship Educational Program

- Progressive experience and responsibility in teaching EMS to health care professionals
- Must be offered an average of at least three hours per week of planned educational experiences
 - Presentations based on the defined curriculum
 - Morbidity and mortality conferences
 - Journal review
 - Administrative seminars
 - Research methods
- Education may include (not limited to)
 - Problem-based learning
 - Research
 - Computer-based instruction
 - Joint conferences cosponsored with other disciplines

Fellowship Educational Program

- Responsible for regular contributions to formal didactic experiences within the training program, in other academic departments, and in the community
- Research leading to publication should be encouraged
- Must include instruction in ACGME core competencies:
 - Patient care
 - Medical knowledge
 - Practice-based learning and improvement
 - Interpersonal and communication skills
 - Professionalism

Funding of Fellowship Programs

- Anecdotally: most are funded through clinical dollars brought in by the fellow working ED shifts

May 2010 survey of EMS fellowship directors
(25 respondents)

- Entirely clinical revenue: 36%
- Clinical plus dept funds: 52%
- Dept funds w/o clinical revenue: 0%
- EMS system: 12%

Sources of funding if clinical revenue is not available

- Clinical department 59%
- Foundation/grant 5%
- Hospital 23%
- Medical school 14%
- EMS system 45%
- Local government (not EMS) 23%

ACGME Program Requirements for Graduate Medical Education in Toxicology

- Program Requirement IV.A.5.a.(5)
- **Fellows should have the opportunity to maintain their primary board skills during training. But, the program may not require that residents provide more than 12 hours per week of clinical practice not related to medical toxicology.**
- *Can these 12 hours be billable by fellow directly?*
- *Answer: Yes, if the fellow is practicing in his/her primary specialty (emergency medicine or other specialty), he/she is functioning as an emergency medicine attending and not as an EMS fellow. However, if the fellowship is funded direction by institutional GME dollars, the fellow may not bill directly for any service whether within or outside of the specialty of the training program.*

ACGME Program Requirements for Graduate Medical Education in Chemical Pathology

- **VI.D.3. Any hours a fellow works for compensation at the sponsoring institution or any of the sponsor's primary clinical sites must be considered part of the 80-hour weekly limit on duty hours. This refers to the practice of *internal moonlighting*.**

- http://www.acgme.org/acWebsite/downloads/RRC_progReq/306chem07012004.pdf

Next Steps: ACGME

- ACGME board formally recognized EMS as a subspecialty in June 2010
- RRC-EM must now create the PIF and finalize the program requirements
- Initially programs will become accredited during site visits of their parent EM programs
- "...program requirements and a PIF will need to be developed, a process that will take approximately 1.5 to 2 years."
 - Lynne Meyer, RRC-EM Exec Dir, 5/27/2010

Certification

- Define and codify eligibility criteria
- Creation of initial certifying examination
- Ongoing revision of core content and examination blueprint
- Maintenance of Certification (MOC) program

Next Steps: ABEM

- Convene writing panel for Subspecialty certification test development
 - First meeting Feb 2011
 - Projected first test Fall 2013
- Create blueprint for test from current EMS core content
 - Conduct practice survey of EMS physicians
- Finalize and codify eligibility requirements
- Develop MOC program specific for EMS
 - Will mirror EM MOC process

Eligibility to sit for certification

General Requirements for all applicants

- General Qualifications
 - MD or DO
 - Current active, valid, full, unrestricted, and unqualified license to practice medicine
- Primary certification by an ABMS member board
 - Current primary certification (diplomate) by a sponsoring or participating ABMS member board

Proposed Eligibility

Practice Pathways (*sunsets 5 yrs after ABMS approval*)

- Option #1
 - Successful completion of an acceptable, unaccredited fellowship in Emergency Medical Services, and
 - Within 6 years immediately preceding the application, a minimum of **24** months EMS practice (at least 400 hours/yr) as:
 - *Assistant, Associate, or Medical Director of an EMS agency with patient care responsibility or*
 - *Direct provider of prehospital emergency care*
- Option #2
 - Within 6 years immediately preceding the application, a minimum of **60** months EMS practice (at least 400 hours/yr) as:
 - *Assistant, Associate, or Medical Director of an EMS agency with patient care responsibility or*
 - *Direct provider of prehospital emergency care*

Training Pathway Eligibility

- Successful completion of an ACGME accredited fellowship in Emergency Medical Services

Take-Home Points

- How did EMS become a recognized subspecialty?
- Definition of the EMS subspecialty
- Possible impact of program requirements on fellowship programs
- Proposed certification test eligibility criteria
- ACGME and ABEM next steps
