

EMS as a Recognized Subspecialty: Implications for Fellowship Training

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Disclosures

- None.
- This session was presented at the Society for Academic Emergency Medicine annual meeting, Phoenix AZ, June 2010.



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

What is a medical subspecialty?



- American Board of Medical Specialties
 - 24 member boards (including ABEM) representing 145 medical specialties and subspecialties


AMERICAN BOARD	GENERAL CERTIFICATE(S)	SUBSPECIALTY CERTIFICATE(S)
Allergy and Immunology	Allergy and Immunology	No Subspecialties
Anesthesiology	Anesthesiology	Critical Care Medicine Hospice and Palliative Medicine Pain Medicine
Colon and Rectal Surgery	Colon and Rectal Surgery	No Subspecialties
Dermatology	Dermatology	Clinical and Laboratory Dermatopathology Pediatric Dermatology
Emergency Medicine	Emergency Medicine	Hospice and Palliative Medicine Pediatric Emergency Medicine Undersea and Hyperbaric Medicine
Family Medicine	Family Medicine	Medical Toxicology Sports Medicine Adolescent Medicine Hospice and Palliative Medicine Sports Medicine Geriatric Medicine
Internal Medicine	Internal Medicine	Adolescent Medicine Gastroenterology Nephrology Advanced Heart Failure and Transplant Cardiology (1) Geriatric Medicine Pulmonary Disease Hematology Rheumatology Cardiovascular Disease Hospice and Palliative Medicine Sleep Medicine Clinical Cardiac Electrophysiology Infectious Disease Sports Medicine Critical Care Medicine Interventional Cardiology Transplant Hepatology
Medical Genetics	Clinical Biochemical Genetics* Clinical Cytogenetics* Clinical Genetics (MD)* Clinical Molecular Genetics*	Endocrinology, Diabetes and Metabolism Medical Biochemical Genetics (2) Molecular Genetic Pathology
Neurological Surgery	Neurological Surgery	No Subspecialties
Nuclear Medicine	Nuclear Medicine	No Subspecialties
Obstetrics and Gynecology	Obstetrics and Gynecology	Critical Care Medicine Hospice and Palliative Medicine Reproductive Endocrinology/Infertility Gynecologic Oncology Maternal and Fetal Medicine
Ophthalmology	Ophthalmology	No Subspecialties
Orthopaedic Surgery	Orthopaedic Surgery	Medical Surgery of the Hand
Otolaryngology	Otolaryngology	Neurotology Plastic Surgery Within the Head and Neck Sleep Medicine Pediatric Otolaryngology

AMERICAN BOARD	GENERAL CERTIFICATE(S)	SUBSPECIALTY CERTIFICATE(S)
Pathology	Anatomic Pathology and Clinical Pathology Pathology - Anatomic Pathology - Clinical	Blood Banking/Transfusion Medicine Pathology-Chemical Pathology-Forensic Pathology-Hematology Pathology-Pediatric Cytopathology Dermatopathology Neuropathology Medical Microbiology Pathology-Cardiology Pathology-Pediatric Adolescent Medicine Pediatric Cardiology Pediatric Nephrology Child Abuse Pediatrics (3) Pediatric Critical Care Medicine Pediatric Pulmonology Developmental-Behavioral Pediatrics Pediatric Emergency Medicine Pediatric Rheumatology Hospice and Palliative Medicine Pediatric Endocrinology Pediatric Transplant Hepatology Medical Toxicology Pediatric Gastroenterology Sleep Medicine Neonatal-Perinatal Medicine Gastroenterology Sports Medicine Pediatric Hematology-Oncology Pediatric Infectious Diseases Pediatric Rehabilitation Medicine Sports Medicine
Pediatrics	Pediatrics	Hospice and Palliative Medicine Pain Medicine Spinal Cord Injury Medicine Medical Toxicology Pediatric Rehabilitation Medicine Sports Medicine Neurodevelopmental Disabilities Pediatric Infectious Diseases
Physical Medicine and Rehabilitation	Physical Medicine and Rehabilitation	Hospice and Palliative Medicine Pain Medicine Spinal Cord Injury Medicine Neuromuscular Medicine Pediatric Rehabilitation Medicine Sports Medicine
Plastic Surgery	Plastic Surgery	Plastic Surgery Within the Head and Neck Surgery of the Hand
Preventive Medicine	Aerospace Medicine* Occupational Medicine* Public Health and General Preventive Medicine*	Medical Toxicology Undersea and Hyperbaric Medicine
Psychiatry and Neurology	Psychiatry* Neurology* Neurology with Special Qualification in Child Neurology*	Addiction Psychiatry Geriatric Psychiatry Pain Medicine Child and Adolescent Psychiatry Hospice and Palliative Medicine Psychosomatic Medicine Clinical Neurophysiology Neurodevelopmental Disabilities Sleep Medicine Forensic Psychiatry Neuromuscular Medicine Vascular Neurology
Radiology	Diagnostic Radiology* Radiation Oncology* Radiologic Physics*	Hospice and Palliative Medicine Nuclear Radiology Vascular and Interventional Radiology Neuroradiology Pediatric Radiology
Surgery	Surgery Vascular Surgery	Hospice and Palliative Medicine Pediatric Surgery Surgical Critical Care Surgery of the Hand
Thoracic Surgery	Thoracic Surgery	Congenital Cardiac Surgery (2)
Urology	Urology	Pediatric Urology



Existing Subspecialties in EM

- Medical Toxicology (ABEM, ABP, ABPM)
- Pediatric EM (ABEN, ABP)
- Sports Medicine (ABEM, ABFM, ABIM, ABP, ABPMR)
- Undersea & Hyperbaric Medicine (ABEM, ABPM)
- Hospice & Palliative Medicine (ABEM, ABA, ABFM, ABIM, ABOG, ABP, ABPMR, ABPN, ABR, ABS)



Current status of a formal subspecialty in EMS

- "...ABEM has announced there is an application for physician EMS subspecialty certification currently working through ABMS which has been favorably received. It is fully expected that this will be a reality". – D. Perina, 3/3/10
- How did we get here?



Brief History: First Attempt

- Mid-1990s
- July 31, 1997: ABEM elects not to pursue
 - Too administrative
 - Not clinical enough



Brief History: Certification by NAEMSP?

- EMS Physician Certification Task Force created in 2001 by Rick Hunt, to explore possibility of NAEMSP offering certification
- Jon Krohmer served as chair



Brief History: Updating Curriculum

- Committee formed to look at revising the 1994 “Prototype Core Content for a Fellowship in EMS”
 - Jointly created by SAEM and NAEMSP, early 1990s
 - *Ann Emerg Med* 1994;23:109
 - Krohmer, Swor, Cone, Rubin
- Committee realized this can’t be done in a vacuum – too many changes in post-residency education to simply tweak prior version
 - Editorial in *Prehospital Emergency Care* in 2005
 - *PEC* 2005;9:371-374

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



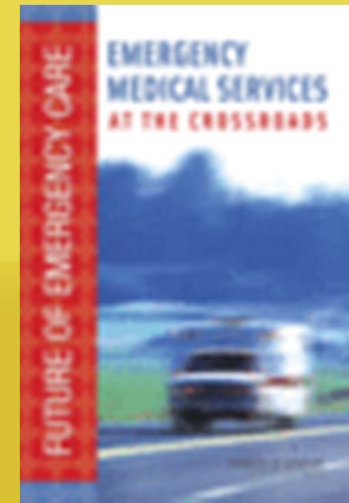
- 2. Emergency Medical Services at the Crossroads



- 3. Emergency Care for Children: Growing Pains



IOM EMS Report: p, 7



- “substantial variation exists nationwide in how medical oversight and review are conducted; in many localities, physicians with little or no training and experience in out-of hospital medical care provide this service. 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...”



IOM EMS Report: p, 7

- “... 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



IOM: Recommendation 4.4

- **The American Board of Emergency Medicine should create a subspecialty certification in EMS.**



Serious Movement

- Aug 2006: NAEMSP (Bob O'Connor) approached ABEM with IOM recommendation
- 2007: ACEP representation added to NAEMSP's EMS Physician Certification Task Force
 - Bill Jermyn as co-chair, then Bob Bass
- 4/1/08: First call with ABEM to discuss application



Sub-Committees


- Core Content: Michael Millin
 - Scope of Practice: Bob O'Connor
 - Educational Standards: John McManus
 - Fellowship: Carin Van Gelder
 - Examination: Bobby Greenber
 - Community Support: David Schoenwetter
 - Scientific Basis: Richard Sattin
 - Curriculum: Jane Brice
-
- 41 members total



Written Application

- First draft to ABEM October 2008
- Substantially revised by Sandy Bogucki and Debra Perina at NAEMSP meeting in January 2009
- First review by ABEM February 2009
- Final draft submitted to ABEM spring 2009

- ABEM submitted application to ABMS in August 2009



ABMS Committee on Certification, Subcertification and Recertification

- February 2010: COCERT met and reviewed application – D. Perina testified on behalf of ABEM
- Late March 2010: Letter to ABMS with four queries
- ABEM is drafting a reply to queries
- Response is due to ABMS by June 15



Purpose of an EMS subspecialty

- “The purpose of the proposed 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 an 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 History

- Previous applications for subspecialty certification had failed because
 - Curriculum too administrative
 - Curriculum not clinical
- So the mission was:
 - To write a clinical EMS fellowship curriculum
 - To capture our work in clinical terms



Development of a Curriculum

- Began with EMS Core Content
- Developed outline
- 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



Curriculum Writing Team

- Jane Brice
- Jason Liu
- Kathy Rinnert
- Colleen Buono
- Jason Carter
- Russell MacDonald



The Final Product

- 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



Curriculum Format

- Medical Oversight of EMS
 - Medical Oversight
 - EMS Systems
 - EMS Personnel
 - System Management



Curriculum Format

- Quality Management and Research
 - Quality Management
 - Research



Curriculum Format

- 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



How does the ACGME expect me to use this document?

- Appendix G of the application: Proposed ACGME Program Requirements for Graduate Medical Education in Emergency Medical Services (Emergency Medicine)
- Based on ACGME “common requirements” for GME programs
- Very similar to emergency medicine residency program requirements



How does the ACGME expect me to use this document?

- An EMS fellowship program must
 - Provide experience in clinical practice of EMS for all age groups
 - 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

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



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
 - Current plan is to consider a residency graduate from any specialty, 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 clinical experiences unavailable at the primary clinical site/sponsoring institution
 - Unclear if this applies if primary site can provide all.



Fellowship Institution

Consultants from appropriate medical specialties

- Disaster and mass casualty incident management
- Mass gatherings
- Resuscitation
- Critical care
- Aeromedicine
- 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 the 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 educational environment conducive to educating fellows in each of the ACGME competency areas
 - Have current certification in specialty ^{DCC1} by ABEM or possess qualifications acceptable to Review Committee

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DCC1

Does this mean EM, or EMS? Specialty, or subspecialty?

David C. Cone, MD, 5/25/2010



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
- Nonphysician 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



Fellowship Faculty - Duties

- Some members of the faculty should also 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 settings



Fellowship Resources

- 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 aeromedical 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

- 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

- Progressive experience and responsibility in teaching EMS to health care professionals
- 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



Fellowship Educational Program

- ACGME 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
- Survey of current EMS fellowship director 5/10
- 25 respondents



Current Funding of EMS Fellowship Programs

- 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%



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.
- Question: Can these 12 hours be billable by the fellow directly?
- Answer: Yes, since in that capacity, the fellow is typically practicing his/her primary specialty (emergency medicine or preventive medicine), he/she is functioning as an emergency medicine attending and not as a medical toxicology fellow.

Lynne Meyer, RRC-EM Exec Dir, 5/27/2010



Is this “moonlighting”?

- **ACGME Common Requirements for One-Year Fellowships**
 - VI.E. Moonlighting
 - “Internal moonlighting must be considered part of the 80-hour weekly limit on duty hours.”
- http://www.acgme.org/acWebsite/home/One_Year_Common_Program_Requirements.pdf



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



The Certification Exam

- “A half-day secure certification examination consisting of approximately 200 multiple choice questions will be administered through a computerized examination. The content and scope of the examination will be determined by a item writing group which will create the test items and recommend to ABEM for approval the blueprint for the examination, the pass/fail score, and serve as consultants on issues of eligibility and other policies.”



When?

- “We are hoping to offer the first test in 3 years. That will happen if all the pieces fall in place.”
 - M. Soderstrom, ABEM, 5/28/2010
- No guarantees! Many factors could move this in either direction.



Next Steps

- ABMS COCERT Meeting July 27
 - Deb Perina will present replies to queries
 - Application will be discussed in executive session
 - A vote will be taken
- Could move application to the ABMS Assembly for potential approval in September 2010 with creation of the subspecialty at that time
- Could send back to COCERT for a “third reading”
 - would then come up again in January 2011



Next Steps: ACGME

- “If approved, then 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



What to do in the meantime?

- Never too early to begin preparations!
- Start looking at the DRAFT curriculum to see how you might go about implementing it.
- Start thinking about program requirements, the need for a second site, etc.
- We will keep you posted...