Best Practices in Residency Training: Reaching for Excellence
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Resources for an Academic Emergency Medicine Elective

A Resource Document Provided by the SAEM GME Committee

Background
Five years ago the SAEM Board of Directors asked the GME Committee to develop an objective that would provide a resource for an academic emergency medicine elective. This objective recognized the need that was expressed by many program directors of providing an experience that would excite and motivate individuals towards a career in academic emergency medicine. Under Linda Spillane’s leadership as Chairman of the GME Committee at that time, the elective experience was organized in such a way as to provide flexibility in its design. The GME Committee produced a document that can serve as a resource in the development of an academic emergency medicine elective for individual residents. It is available online at: http://www.saem.org/download/resource.doc.

What is the need for academic emergency physicians?
The need for individuals interested in academic emergency medicine exists to a significant extent. In 2003, 3975 residents took the American Board of Emergency Medicine In-training exam.1 This corresponds to 132 current residencies in emergency medicine. The RRC-EM requires one core faculty member for three residents (although exceptions are made after 27 residents). Using this formula, 1325 core faculty members would be needed for the number of residents that took the in-training exam. The ACGME states that “the majority of core faculty must:
c. show evidence of participation in a spectrum of professional activities within the institution as well as within local, state, regional, and national associations.
d. be engaged in research and have protected time and adequate support services to accomplish these tasks.”2

The 1325 core faculty members needed for this number of residents is in addition to those medical schools that have academic departments of emergency medicine but no residency, as well as those teaching hospital EDs that emergency medicine residents may rotate at, but is distinct from the formal residency. A conservative estimate is that overall there is a need for 2000 some academic emergency physicians, involved in scholarly activity and professional activities to varying extent.

A goal with developing the academic emergency medicine elective was to help identify those individuals during residency training who may have an interest in academic emergency medicine. The elective time would be used to expose them to a particular area of academic emergency medicine, perhaps stimulating their interest more.

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Faculty Development Begins in Residency!
Drs. Hamilton and Brown defined faculty development as “…is about planned change over the course of one’s academic career.”3 They go on to stress that faculty development recognizes the skills necessary to succeed in academic medicine. Other than the term “faculty,” there is no reason why the skillsets necessary to faculty development have to wait until completion of residency training for definition and development. The Resources for an Academic Emergency Medicine Elective developed by the SAEM GME Committee present a mechanism in which a program director can individually develop an academic EM experience for a specific resident.

Organization of the Resources for an Academic Emergency Medicine Elective Document
The Resources document is not meant to serve as the elective experience. It is meant to provide resources that a program director and resident may use in developing an individualized elective experience. Most rotations are one month long in length. Faculty development is a life-long process. For this reason it is necessary to customize the elective, based on specific areas of interest of the individual resident.
The Resources document is organized into specific areas important to academic emergency medicine:

1. Elements of an Academic Emergency Medicine Career
2. Computer Skills
3. Teaching Skills
4. Research Project Development and Academic Writing
5. Professional and Personal Development

Within each one of these areas are a variety of resources, including online, book, and journal citations.

To develop an academic emergency medicine elective experience for a specific resident, one or more of the above areas can be chosen. The goals and objectives along with specific resource references can be pasted into a customized elective document roadmap for that specific resident’s elective.

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Resources for an Academic Emergency Medicine Elective

SAEM GME Committee
Resources for an Academic Emergency Medicine Elective

The Society for Academic Emergency Medicine (SAEM) recognize the need for an academic emergency medicine elective during residency training. To that end SAEM has asked the Graduate Medical Education (GME) Committee to develop resources for this elective as an educational resource. The experiences described in this document are intended to foster professional development among emergency medicine residents interested in an academic emergency medicine career.

Academic emergency medicine means different things to different people. A basic definition might include those aspects that promote the development of Emergency Medicine as a specialty, including research and teaching. Academic emergency medicine is as large as our specialty. Virtually any aspect of emergency medicine would benefit from research as well as the development of specialized knowledge that can be taught to others.

The overall goal of this resource is not to produce an individual proficient in teaching, research project development, academic writing, or any other aspect of academic emergency medicine. Proficiency in these areas is a lifelong goal, and additional postgraduate training strongly facilitates development and success. Information in this resource provides a clearer understanding of the skill sets needed for a successful academic career. We hope that exposure to these concepts will foster an interest in the pursuit of an academic emergency medicine career and provide some basic tools to reach these goals.

We encourage program directors to utilize selected components of this resource in order to facilitate the goals outlined above. The material in this resource is extensive, and cannot be thoroughly covered during the finite time encompassing most electives. Instead, it serves as a starting point from which the program director (and resident) can “pick and choose” various components to meet their identified goals. Even if an academic career is not contemplated, aspects of this elective such as time management skills, wellness issues, and life-long learning strategies are valuable for all practicing emergency physicians.

The development of this elective was undertaken by members of the GME Committee of SAEM, spearheaded by Linda Spillane. Other contributors included Steven A. McLaughlin, Steven H. Bowman, J.A. Tyndall, Mark Fourre, Michael Burg, Michael Beeson, Wendie Williams and Carey Chisholm.
Academic Emergency Medicine Elective
Recommended general goals

1. Develop an appreciation of the elements of an academic emergency medicine career
2. Learn the basic skills necessary for an academic emergency medicine career
3. Develop a personal strategy for academic development
4. Develop life-long learning strategies

1. Elements of an Academic Emergency Medicine Career
These resources can increase knowledge of the skills required for an academic emergency medicine career, including computer skills, teaching skills, research project development, academic writing, professional development, life-long learning skills, and time management. The resident should understand academic rank, the differences between tenure and non-tenure tracks, as well as the structure and function of a P&T committee. Components of a promotion file and questions to assist in evaluating an academic position are other valuable topics.

Literature:

Texts:
- Schoenfeld AC, Magnen R. *Mentor in a manual: Climbing the academic ladder to tenure. 2nd Ed*. Atwood Publishing.

Web Resources:
- SAEM Faculty Development Website
  http://www.saem.org/facdev/index.htm
- SAEM Faculty Development Handbook 2001
  http://www.saem.org/facdev/Mainpages/fdguide.htm
- SAEM Emergency Medicine: An Academic Career Guide
  http://www.saem.org/publicat/intro.htm
- SAEM Faculty Development Links
  http://www.saem.org/facdev/Mainpages/links_annotated_bib.htm

Formal Courses:
- Annual “Navigating the Academic Waters” sponsored by CORD.
- SAEM annual meeting always has educational track sessions geared towards early academic career development.
Other Resources:

- **Faculty Mentoring**
  Selected faculty (EM or even from other specialties) may allow valuable mentoring in the area of early academic career planning.

- **Meetings**
  Attending Emergency Department faculty meetings may provide insight into governance and problem solving in this setting. Other selected institutional meetings may be beneficial. In general, attendance along a continuum permits a deeper insight into governance and problem solving than does a single exposure.

**Computer Skills**

Computer skills are critical to time management, efficiency and productivity. They are also increasingly key to life long learning skills. The resident may be requested to develop and deliver a presentation using some or all of these components. The following areas are worthwhile considerations in developing an academic skill set:

A. Basic proficiency with a word processing program, including the use of bibliographic citation resources (e.g. Endnote)

B. Proficiency with graphics and presentation programs (e.g. Microsoft PowerPoint, including formatting of the Master slide, use of the notes option, insertion of graphics, and use of the Slide Show feature)

C. Ability to perform an efficient search of electronic databases such as Ovid, Cochrane or Best Practices

**Resources:**

**Literature:**

**Texts:**
- Microsoft PowerPoint 2000 Training CoursePak (Book and CD) Complete 8 Lessons. Available at [www.amazon.com](http://www.amazon.com)

**Web Resources:**
- Medical Informatics for Faculty Development [http://www.omerad.msu.edu/reznich/homepage5.html](http://www.omerad.msu.edu/reznich/homepage5.html)
Other Resources:

- **Computer courses within the resident’s institution**
  The resident could opt to attend a computer training course within his/her home institution.

- **Commercially available computer courses**
  The resident could opt to attend a commercially available computer course.

- **Medical Librarian tutorial**
  The resident could meet with his/her institution’s medical librarian to acquire the skills necessary to perform an effective and complete Medline search on the Internet.

- **Electronic database search expert**
  The resident could meet with his/her faculty advisor, research director, or other appropriately skilled individual to acquire the ability to perform electronic database searching.

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**Teaching Skills**

Bedside and formal didactic teaching skills are critical to almost all faculty. While proficiency in either venue requires years of practice and refinement, the following activities can assist in foundation formulation for those skills:

A. Learn component steps in developing and delivering a successful didactic presentation, with attention to audience needs assessment and delivery options.

B. Develop and deliver an engaging presentation for a specific audience on a narrowly focused topic.

C. Discuss components of didactic delivery that increase learning and retention effectiveness.

D. Review videotape of one’s presentation.

E. Learn methods of bedside teaching to medical students and interns.

F. Learn component steps used in teaching technical skills.

G. Learn and practice evaluation and feedback techniques. The resident may assist designated faculty in preparing shift or rotation evaluations for medical students or more junior residents.

H. Demonstrate effective evaluation and feedback techniques.

I. Discuss the definition of a curriculum, and demonstrate knowledge of curricular development and assessment.

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**Resources:**

**Texts:**


• Ailes R. *You are the Message*. 1988. Doubleday.


Literature:
• Lane JL. Structured clinical observations: a method to teach skills with limited time and financial resources. Pediatrics 2000;105:973-977.


Websites:
• SAEM Faculty Development Web page http://www.saem.org/facdev/index.htm

• SAEM Faculty Development Handbook 2001 http://www.saem.org/facdev/Mainpages/fdguide.htm

• SAEM Faculty Development Links http://www.saem.org/facdev/Mainpages/links.annotated.bib.htm

• Searle Center for Teaching Excellence http://president.scfte.nwu.edu/

• Dalhousie University Instructional Development and Technology Sites http://is.dal.ca/~oidt/ids.html

• USC Education Links http://www.usc.edu/admin/provost/cet/

• The Penn State Teacher Online Textbook http://www.psu.edu/celt/PST/pst.shtml
• UT Austin Teaching Links
  http://www.utexas.edu/academic/cte/tl.html

• Getting Ready to Teach - Resources for Teaching Assistants
  http://www.uni.edu/walsh/teach.html

• The Preceptor Development Program
  http://www.mtn.ncahec.org/pdp

• Stanford Faculty Development Program
  http://www.stanford.edu/group/SFDP/

• Medical College of Wisconsin Faculty Development
  http://iago.lib.mcw.edu/edserv/faculty.html

• SAEM Emergency Medicine: An Academic Career Guide Chapters 7, 8, 14
  http://www.saem.org/publicat/intro.htm

Formal Courses:
• EMF/ACEP Teaching Fellowship
  http://acep.org/1,5339,0.html

• Harvard Short Course for Medical Educators
  http://www.hms.harvard.edu/oed/macy/

• McGill Teaching Scholars Program
  http://www.medicine.mcgill.ca/facdev/

Other Resources:
• Practical Experience
  The resident should deliver lectures, conduct workshops, facilitate seminars, and otherwise formally instruct members of his/her department. Under the direct supervision of selected faculty the ED resident could function as the “administrative faculty” responsible for patient flow and operational problem solving.

• Teaching Resident
  For a series of ED shifts the resident would serve as the designated teaching resident or “mini-attending” with faculty oversight. In this role the resident would be responsible for directing and supervising the medical care delivered by others working in the department. Faculty could provide immediate critique and feedback about the oversight provided by the resident.

• Local Speaker’s Bureau
  The resident could join his/her institution’s speaker’s bureau or community outreach program.

• EMRA Speaker’s Bureau
  The resident could join this speaker’s bureau.
Research Project Development and Academic Writing and scholarly activity
These are advanced skill sets learned through focused effort and training over time. However, involvement in these activities is beneficial for the resident. Activities may include:

A. Outline the necessary steps in identification, development, institutional approval, methods development, and data collection for a desired research project.
B. Outline methods for bibliographic citation management, including article collection and organization.
C. Explore strategies for academic writing and common pitfalls for new authors.
D. Discuss the peer review editorial process.
E. Demonstrate knowledge of how to perform an efficient, focused Medline search.
F. Outline methods for bibliographic citation management, including article collection and organization.
G. Detail the variety of academic writing (non-peer review, editorials, original contributions, review articles, case presentations). Discuss the pros and cons of each.

Resources:
Literature:
- *Users’ Guides to the Medical Literature*: JAMA 270(17):2093 to present. A series written by several authors of over 25 articles on the use of, and preparation for writing, medical literature.
- Cordell W: *Using Endnote to Automate Manuscript Preparation*. Technology Corner—CORD Newsletter April 1999


• Bulpitt C. Confidence intervals. Lancet. 1987 (Feb 28);494-97.

• Detsky A et al. When was a “negative” clinical trial big enough? Arch Intern med. 1985;145:709-12.


Texts:


Web Resources:
• SAEM Faculty Development Website  http://www.saem.org/facdev/index.htm

• SAEM Faculty Development Handbook 2001  http://www.saem.org/facdev/Mainpages/fdguide.htm


• Academic Emergency Medicine (AEM): Advice and Instructions for Authors  http://saem.org/inform/journal.htm

Formal Courses:
• Emergency Medicine Basic Research Skills  http://acep.org  (listed under continuing education)

• EMF/ACEP Teaching Fellowship  http://acep.org/  (listed under continuing education)
- **Navigating the Academic Waters: Tools for Emergency Medicine**
  [http://www.cordem.org/facdev/meeting.htm](http://www.cordem.org/facdev/meeting.htm)

  **Other Research Skills Course**
  The resident could attend a research skills workshop offered by his/her institution or by another educational institution.

  **Research Director**
  The resident could learn the skills above from his/her department’s research director or other similar expert.

**Professional and Personal Development**
These skills can be considered invaluable to any successful EM physician.

A. Understand the need to develop a personal strategy for ongoing professional development, including timelines for academic advancement and development of a specialized knowledge base in a focused area of emergency medicine.

B. Discuss techniques for successful interpersonal interactions and conflict resolution.

C. Recognize warning signs of threats to wellness, as well as techniques to maintain wellness.

D. Apply principles of time management including maintenance of an operational calendar and prioritizing “to do” lists.

E. Describe effective ways for managing the demanding needs of career and family.

F. Demonstrate knowledge of evidence-based medicine evaluation of clinical care questions.

G. Understand the ABEM CCEM program.

**Resources:**

- **Literature:**
- Shaughnessy AF, Slawson DC. Are we providing doctors with the training and tools for lifelong learning?. Interview by Abi Berger. BMJ 1999 Nov 13;319(7220):1280.


Texts:
- Schoenfeld AC, Magnen R. Mentor in a manual: Climbing the academic ladder to tenure. 2nd Ed”. Atwood Publishing.


• Brinkerhoff JR. *101 Commonsense Rules for Making Things Happen*. 1st Ed. 1993 Stackpole Books

• Covey SR. *The 7 Habits of Highly Effective People*. 1990.


Web Resources:

• SAEM Faculty Development Website  [http://www.saem.org/facdev/index.htm](http://www.saem.org/facdev/index.htm)

• SAEM Faculty Development Handbook 2001


• Wright State school of medicine faculty development website  [http://www.med.wright.edu/fca/profdev](http://www.med.wright.edu/fca/profdev)

• Academic Emergency Departments: Robert McNamara M.D.  [http://www.emedicine.com/emerg/topic672.htm](http://www.emedicine.com/emerg/topic672.htm)


• Medicine Continuous Certification – Revised July 2001  [www.abem.org/faculty/faculty.htm](http://www.abem.org/faculty/faculty.htm)


**IMPLEMENTATION METHODS**

These resources may be used selectively during a single block rotation within the Department of Emergency Medicine. Alternatively, a longitudinal “track” could be designed. In this type of program, a resident would declare his/her interest in pursuing an academic EM career early in his/her residency training. The “academic track” EM resident would then accomplish selected components over the last 1-2 years of their residency.
A resident or program director may choose to develop any section of this document (i.e. Academic Writing, Teaching Skills) as a freestanding elective. The Program Director or his/her surrogate will supervise and evaluate this experience.

Specific Activities:

**Mentorship** - Residents are assigned to work with key identified individuals who are examples and role models for the area of academic emergency medicine they are studying. These individuals will mentor the resident during the elective, offering advice as well as personal experience to the assigned material and projects.

**Didactics** - Presentations on time management, life-long learning skills, computer skills, teaching skills, research project development, and professional development will be given during this elective experience by members of the Department of Emergency Medicine faculty.

**Delphi discussion groups** (e-mail “threads” commenting about assigned group reading) may be used for discussion of selected readings and experiences.

**Reading Assignments** – As noted within each heading.

**Skills** - These may include an observed lecture, observed bedside teaching, computer literature search, development of a research project, analysis of an academic paper, etc. Each of these activities will be supervised and evaluated by appropriate Emergency Medicine faculty.

**Evaluation**

Residents receive a written evaluation upon completion of the Academic Emergency Medicine Elective rotation or course of study. Residents are evaluated specifically on their progress in attaining the pre-agreed upon goals and objectives.