

**Emergency Medicine:  
AAEM's Rules of the Road for Medical Students**

**THE GUIDE FOR A CAREER IN EMERGENCY MEDICINE  
THE AAEM RESIDENT SECTION (AAEM/RES)**

**2003: First Edition**

**Chief Editors:**  
A. Antoine Kazzi, MD, FAAEM, FACEP  
Joel M. Schofer, MD

**Emergency Medicine:  
AAEM's Rules of the Road for Medical Students**

**THE GUIDE FOR A CAREER IN EMERGENCY MEDICINE  
THE AAEM RESIDENT SECTION (AAEM/RES)**

**First Edition**

© 2003 by the American Academy of Emergency Medicine. All rights reserved. No part of this book may be used or reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without written permission except in the case of brief quotations embodied in critical articles and reviews. For information address: American Academy of Emergency Medicine, 611 East Wells Street, Milwaukee, WI 53202.

Copy Editor: Ken Janowski, AAEM Program Manager  
Printed in the United States of America



# Table of Contents

## Content & Contributors

### Preface

### Acknowledgements

### Part I: Introduction

### Part II: The Residency Applications Process

#### Chapters:

- 1 - The Match: An Overview ..... p.39
- 2 - Is Emergency Medicine the Right Choice for Me? ..... p.45
- 3 - What Do Residency Directors Look for in an Applicant? ..... p.51
- 4 - Selecting Your Medical School Advisor ..... p.61
- 5 - Letters of Recommendation ..... p.65
- 6 - Writing Your CV and Personal Statement ..... p.73
- 7 - Visits and Interviews ..... p.81
- 8 - Ranking Programs: Medical Student Strategies ..... p.91
- 9 - Applying to More than One Specialty? ..... p.99
- 10 - Three- Versus Four-Year Emergency Medicine Programs? ..... p.105
- 11 - Combined Residency Training Programs  
    in Emergency Medicine ..... p.113
- 12 - Applicants with Prior Training ..... p.121
- 13 - Couple's Match in Emergency Medicine ..... p.129
- 14 - Scrambling for a Spot & Going Outside The Match ..... p.133
- 15 - Moonlighting and Emergency Medicine ..... p.137

### Part III: The Clinical Years

- 16 - Designing Your Third and Fourth Years Clerkship Schedule ..... p.145
- 17 - Role of an Emergency Medicine Clerkship:  
    How Many and Where? ..... p.151
- 18 - Your Emergency Medicine Clerkship: How to Be a Star! ..... p.155
- 19 - Research and Scholarly Projects ..... p.163
- 20 - Medical Student Leadership ..... p.171
- 21 - Emergency Medicine Interest Groups ..... p.179
- 22 - How to Plan Your Medical School Finances ..... p.185

### Part IV: What Can You Do With Emergency Medicine Training?

- 23 - Fellowships and Subspecialty Certification ..... p.191
- 24 - Academic vs. Non-Academic Careers in  
    Emergency Medicine ..... p.199

25 - Non-Traditional Career in Emergency Medicine .....	p.209
26 - Urban Versus Rural Practice in Emergency Medicine .....	p.217
27 - Ultrasonography in Emergency Medicine .....	p.225
28 - Formal Management Training in Emergency Medicine .....	p.231
<b>Part V: The Specialty of Emergency Medicine—An Overview</b>	
29 - History and Current State of Emergency Medicine .....	p.237
30 - Emergency Medicine Workforce:	
Current Profile and Projections .....	p.245
31 - Shift Work in Emergency Medicine .....	p.265
32 - Burnout in Emergency Medicine .....	p.271
33 - Emergency Medicine Organizations and Certifying Bodies .....	p.275
34 - Women in Emergency Medicine .....	p.295
35 - Minorities in Emergency Medicine .....	p.301
36 - Military Track Medical Students in Emergency Medicine .....	p.309
37 - Osteopaths and Emergency Medicine .....	p.313
38 - International Medicine Graduates and Emergency Medicine ....	p.317
39 - Gay and Lesbian Issues in Emergency Medicine .....	p.327
40 - How to Deal with Illness, Disability and Unexpected	
Crisis During Medical School and Residency .....	p.333
41 - Pregnancy During Medical School and Residency .....	p.341
42 - Drug and Alcohol Use During Medical	
School and Residency Training .....	p.345
43 - International Emergency Medicine: An Overview .....	p.351
44 - Ethical Duties and Obligations in Emergency Medicine:	
An Overview .....	p.361
45 - Mentorship in Emergency Medicine .....	p.371
<b>Part VI: Political Controversy in Emergency Medicine - An Overview</b>	
46 - Political Controversy in Emergency Medicine:	
Introduction .....	p.377
47 - Alternative Providers and Qualifications in the Workforce ....	p.379
48 - Greed in Emergency Medicine: The Enemy Within .....	p.387
<b>Part VII: Conclusion</b>	
49 - The Future of Emergency Medicine .....	p.407
<b>Common Acronyms and Abbreviations .....</b>	<b>p.410</b>

## The Guide for a Career in Emergency Medicine

The American Academy of Emergency Medicine Resident Section (AAEM/RES)

### CHIEF EDITORS:

1. A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)
2. Joel M. Schofer, MD (Secretary-Treasurer, Former Medical Student Representative, the AAEM Resident Section / Naval Medical Center, San Diego)

### FACULTY EDITORS:

1. Carol L. Barsky, MD, FAAEM (AAEM Board of Directors / Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York)
2. Peter M.C. DeBlieux, MD, FAAEM, FACEP (Residency Director, Louisiana State University, New Orleans)
3. Pamela L. Dyne, MD, FAAEM, FACEP (Board of Directors, the Council of Residency Directors / Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California, Program Director, UCLA/Olive View-UCLA, Emergency Medicine Residency Program and Co-Director, UCLA/Olive View-UCLA Emergency Medicine and Internal Medicine Combined Residency Program)
4. Micelle J. Haydel, MD, FAAEM (Assistant Residency Director, Louisiana State University, New Orleans)
5. A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)
6. Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (Chair, Medical Director & Residency Director, University of California, Irvine)
7. Joe Lex, MD, FAAEM, FACEP (Chair, AAEM Education Committee/ Chestnut Hill Hospital, Philadelphia)
8. Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)
9. Robert McNamara, MD, FAAEM (Immediate Past President, the American Academy of Emergency Medicine/Chairperson & Director, Temple University, Philadelphia)
10. Margaret O'Leary, MD, MBA, FAAEM (AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee / Chair, the MBA Programs, Benedictine University, Illinois)
11. Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians/Chair, West Suburban Health Care, Illinois / Rush/Cook County Hospital, Chicago)
12. David A. Wald, DO, FAAEM, FCOEP (Assistant Residency Director & Co-Director EM Clerkship, Temple University, Philadelphia)

### RESIDENT EDITORS:

1. Scott G. Weiner, MD (President, Founding Member and Former Medical Student Representative, the AAEM Resident Section / Harvard Affiliated Residency at Beth Israel Deaconess, Boston)

2. Jeannie Tsai, MD (Founding Member & Former Vice-President, the AAEM Resident Section / Former CAL/EMRA President / Secretary-Treasurer, CAL/AAEM / University of Southern California, Los Angeles)
3. Tobey Williams, MD (Immediate Past-President, the AAEM Resident Section / Chief Resident, Louisiana State University)
4. Shahram Lotfipour, MD (Founding Member, AAEM/RES Board of Directors / Former Resident, Henry Ford Hospital System / Vice-President, CAL/AAEM / Director of Undergraduate Medical Education, University of California, Irvine)
5. Scott E. Rudkin, MD (Past President, CAL/EMRA/ Marketing Editor, California Journal of Emergency Medicine, CAL/AAEM / Director of Medical Informatics, University of California, Irvine)
6. Joel M. Schofer, MD (Secretary-Treasurer, Former Medical Student Representative, the AAEM Resident Section / Naval Medical Center, San Diego)

#### **WEB EDITOR:**

Scott E. Rudkin, MD, Director of Medical Informatics, University of California, Irvine

## **Chapter Content, Authors & Editors**

### **I. INTRODUCTION**

#### **RESIDENT AUTHOR:**

Joel M. Schofer, MD (Secretary-Treasurer, Former Medical Student Representative, the AAEM Resident Section / Naval Medical Center, San Diego)

#### **FACULTY AUTHOR:**

Robert McNamara, MD, FAAEM (Immediate Past President, the American Academy of Emergency Medicine / Chairperson & Director, Temple University, Philadelphia)

#### **FACULTY EDITOR:**

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

### **II. THE RESIDENCY APPLICATION PROCESS**

#### **Chapter 1: "The Match: An Overview"**

#### **RESIDENT AUTHOR:**

Joshua Broder, MD (Chief Resident, University of Maryland)

#### **FACULTY AUTHOR:**

Pamela L. Dyne, MD, FAAEM, FACEP (Board of Directors, the Council of Residency Directors / Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California, Program Director, UCLA / Olive View-UCLA, Emergency Medicine Residency Program and Co-Director, UCLA / Olive View-UCLA Emergency Medicine and Internal Medicine Combined Residency Program)

#### **FACULTY EDITOR:**

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)

#### **Chapter 2: "Is Emergency Medicine the Right Choice for Me? "**

#### **RESIDENT AUTHOR:**

Joel M. Schofer, MD (Secretary / Treasurer, the AAEM Resident Section / Naval Medical Center, San Diego)

## FACULTY AUTHOR:

Peter Rosen, MD, FAAEM, FACEP, FACS (Chief Editor, Journal of Emergency Medicine / CAL/AAEM Board of Directors / Residency Director Emeritus, University of California San Diego)

## FACULTY EDITOR:

David A. Wald, DO, FAAEM, FACOEP (Assistant Residency Director & Co-Director EM Clerkship, Temple University, Philadelphia)

**Chapter 3: "What Do Program Directors Look For in an Applicant?"**

## RESIDENT AUTHORS:

Luan E. Lawson, MD (Former Member, AAEM/RES Board of Directors / East Carolina University)

## FACULTY AUTHORS:

Felix Ankel, MD, FAAEM, FACEP (Residency Director, Regions Hospital, Saint Paul, University of Minnesota) & A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

## FACULTY EDITOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Residency Director, Louisiana State University, New Orleans)

**Chapter 4: "Selecting Your Medical School Advisor"**

## STUDENT AUTHOR:

Barbara L. Keller, JD, MS-IV (Louisiana State University, New Orleans)

## FACULTY AUTHOR:

Howard Blumstein, MD, FAAEM (AAEM Board of Directors / Former Assistant Residency Director at Wake Forest University & the Medical College of Pennsylvania)

## FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Assistant Residency Director, Louisiana State University, New Orleans)

**Chapter 5: "Letters of Recommendation"**

## RESIDENT AUTHOR:

Shahram Lotfipour, MD (Founding Member, AAEM/RES Board of Directors / Former Resident, Henry Ford Hospital System / Vice-President, CAL/AAEM / Director of Undergraduate Medical Education, University of California, Irvine)

## FACULTY AUTHOR:

Gus M. Garmel, MD, FAAEM, FACEP (Co-Program Director, Stanford / Kaiser Residency / Senior Staff Emergency Physician, the Permanente Medical Group)

## FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (Chair, Medical Director & Residency Director, University of California, Irvine)

**Chapter 6: "Writing Your CV and Personal Statement"**

## RESIDENT AUTHOR:

Nicole M. Wakim, BA, MS-IV (Loyola University, Chicago)

## FACULTY AUTHOR:

Jennifer A. Krawczyk Oman, MD, FAAEM, FACEP (Associate Residency Director, University of California, Irvine)

## FACULTY EDITOR:

Pamela L. Dyne, MD, FAAEM, FACEP (Board of Directors, the Council of Residency Directors / Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California, Program Director, UCLA / Olive View-UCLA, Emergency Medicine Residency Program and Co-Director, UCLA / Olive View-UCLA Emergency Medicine and Internal Medicine Combined Residency Program)

**Chapter 7: "Visits and Interviews"**

RESIDENT AUTHOR:

Eric C. Bruno, MD (Medical College of Pennsylvania / Hahnemann University)

FACULTY AUTHOR:

Michelle J. Haydel, MD, FAAEM (Assistant Residency Director, Louisiana State University, New Orleans)

FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (Chair, Medical Director &amp; Residency Director, University of California, Irvine)

**Chapter 8: "Ranking Programs: Medical Student Strategies"**

RESIDENT AUTHOR:

George Ralls, MD (Chief Resident, Orlando Regional Medical Center, University of Florida College of Medicine)

FACULTY AUTHOR:

Steven G. Rothrock, MD, FAAEM, FAAP, FACEP (Orlando Regional Medical Center, University of Florida College of Medicine)

FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (Chair, Medical Director &amp; Residency Director, University of California, Irvine)

**Chapter 9: "Applying to More than One Specialty?"**

RESIDENT AUTHOR:

Cherlin Johnson, MS-IV (Member-Elect, AAEM/RES Board of Directors / University of California, Irvine)

FACULTY AUTHOR:

Susan Stone, MD, MPH (Associate Residency Director, University of Southern California, Los Angeles)

FACULTY EDITOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Residency Director, Louisiana State University, New Orleans)

**Chapter 10: "Three- Versus Four-Year Emergency Medicine Programs?"**

RESIDENT AUTHOR:

Paul Alleyne, MD (Temple University, Philadelphia)

FACULTY AUTHOR:

Richard E. Wolfe, MD, FAAEM, FACEP (Chief, Harvard Affiliated Residency at Beth Israel Deaconess, Boston)

FACULTY EDITORS:

Pamela L. Dyne, MD, FAAEM, FACEP (Board of Directors, the Council of Residency Directors / Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California, Program Director, UCLA/Olive View-UCLA, Emergency Medicine Residency Program and Co-Director, UCLA/Olive View-UCLA Emergency Medicine and Internal Medicine Combined Residency Program)

**Chapter 11: "Combined Residency Programs in Emergency Medicine"**

RESIDENT AUTHOR:

Joseph P. Martinez, MD (Combined Emergency Medicine / Internal Medicine Residency Program, University of Maryland)

FACULTY AUTHOR:

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development &amp; Co-Director, EM/IM Combined Program, University of Maryland)



## FACULTY EDITOR:

Pamela L. Dyne, MD, FAAEM, FACEP (Board of Directors, the Council of Residency Directors / Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California, Program Director, UCLA / Olive View-UCLA, Emergency Medicine Residency Program and Co-Director, UCLA / Olive View-UCLA Emergency Medicine and Internal Medicine Combined Residency Program)

**Chapter 12: "Applicants With Prior Training"**

## RESIDENT AUTHOR:

Kevin M. Ban, MD (Harvard Affiliated Residency at Beth Israel Deaconess, Boston)

## FACULTY AUTHOR:

Daniel R. Martin, MD, FAAEM, FACEP (Chair of the Graduate Medical Committee, the Council of Residency Directors / Residency Director, Ohio State University)

## FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)

**Chapter 13: "Couple's Match in Emergency Medicine"**

## RESIDENT AUTHOR:

Robert W. Collins, MD (Indiana University) & Ann C. Collins, MD (Cornerstone Family Physicians, Indiana)

## FACULTY AUTHOR:

Wendy C. Coates, MD, FACEP (Director of Education, Harbor-UCLA Medical Center, UCLA School of Medicine, Los Angeles)

## FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)

**Chapter 14: "Scrambling for a Spot & Going Outside the Match"**

## RESIDENT AUTHOR:

Adrian Crisan, MD (Martin Luther King, Jr. / Charles R. Drew Medical Center, Los Angeles)

## FACULTY AUTHOR:

Deana Baudonnet, MD (Martin Luther King, Jr. / Charles R. Drew Medical Center, Los Angeles)

## FACULTY EDITOR:

Pamela L. Dyne, MD, FAAEM, FACEP (Board of Directors, the Council of Residency Directors / Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California, Program Director, UCLA / Olive View-UCLA, Emergency Medicine Residency Program and Co-Director, UCLA / Olive View-UCLA Emergency Medicine and Internal Medicine Combined Residency Program)

**Chapter 15: "Moonlighting and Emergency Medicine"**

## RESIDENT AUTHOR:

David T. Huang, MD (Founding Member & Fellow Representative, AAEM/RES Board of Directors / Henry Ford Hospital, Detroit / Multidisciplinary Critical Care Fellow, University of Pittsburgh)

## FACULTY AUTHOR:

Carey D. Chisholm, MD, FAAEM (SAEM Board of Directors / Former President, the Council of EM Residency Directors / Director, Emergency Medicine and Combined EM-Pediatrics Residencies, Indiana University, Indianapolis)

FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (Chair, Medical Director & Residency Director, University of California, Irvine)

### III. THE CLINICAL YEARS

#### **Chapter 16: "Designing Your Third and Fourth Years Clerkship Schedule"**

RESIDENT AUTHOR:

Fred Goodwin, Jr., MD (Georgetown University School of Medicine / Albany Medical Center, New York)

FACULTY AUTHOR:

Louis Binder, MD, FACEP (Past President, the Society for Academic Emergency Medicine / Director of Education, Case Western Reserve University / Metro Health Medical Center, Cleveland)

FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)

#### **Chapter 17: "The Role of an Emergency Medicine Clerkship: How Many and Where?"**

RESIDENT AUTHOR:

Amir Hootan Darvish, MA, MD (Henry Ford Hospital, Detroit)

FACULTY AUTHOR:

Phyllis A. Vallee, MD, FAAEM (Associate Residency Director, Henry Ford Hospital, Detroit)

FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)

#### **Chapter 18: "Your Emergency Medicine Clerkship: How to Be a Star!"**

RESIDENT AUTHOR:

Michael E. Winters, MD (Combined Emergency/Internal Medicine Program, University of Maryland, Baltimore)

FACULTY AUTHOR:

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)

FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Assistant Residency Director, Louisiana State University, New Orleans)

#### **Chapter 19: "Research and Scholarly Projects"**

RESIDENT AUTHOR:

Kyrán Colbry, MD (Oregon Health Sciences University School of Medicine / University of Connecticut)

FACULTY AUTHOR:

Jerris R. Hedges, MD, MS, FAAEM (Past President, Society for Academic Emergency Medicine / Chair, the Oregon Health & Sciences University, Portland, Oregon)

FACULTY EDITOR:

David A. Wald, DO, FAAEM, FACOEP (Assistant Residency Director & Co-Director EM Clerkship, Temple University, Philadelphia)

## **Chapter 20: "Medical Student Leadership"**

### **RESIDENT AUTHOR:**

Scott G. Weiner, MD (President, Founding Member and Former Medical Student Representative, the AAEM Resident Section / Harvard Affiliated Residency at Beth Israel Deaconess, Boston)

### **FACULTY AUTHOR:**

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

### **FACULTY EDITOR:**

David A. Wald, DO, FAAEM, FACOEP (Assistant Residency Director & Co-Director EM Clerkship, Temple University, Philadelphia)

## **Chapter 21: "Emergency Medicine Interest Groups"**

### **RESIDENT AUTHOR:**

Boris V. Lubavin, MD (University of California, Irvine)

### **FACULTY AUTHOR:**

Amal Mattu, MD, FAAEM, FACEP (Maryland ACEP Board of Directors / Director of Academic Development & Co-Director, EM/IM Combined Program, University of Maryland)

### **FACULTY EDITOR:**

Micelle J. Haydel, MD, FAAEM (Assistant Residency Director, Louisiana State University, New Orleans)

## **Chapter 22: "How to Plan Your Medical School Finances"**

### **RESIDENT AUTHOR:**

Kenneth Park, MS-IV (Medical Student Representative & Member-Elect, Board of Directors, the AAEM Resident Section / University of Southern California, Los Angeles)

### **FACULTY AUTHOR:**

Robert W. Wolford, MD, FACEP (Residency Director, Saginaw Cooperative Hospitals / Michigan State University)

### **FACULTY EDITOR:**

Margaret O'Leary, MD, MBA, FAAEM (AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee / Chair, the MBA Programs, Benedictine University, Illinois)

## **IV. WHAT CAN YOU DO WITH EMERGENCY MEDICINE TRAINING?**

## **Chapter 23: "Fellowships and Subspecialty Certification"**

### **RESIDENT AUTHOR:**

Bradley N. Younggren, MD (Madigan Army Medical Center / University of Washington)

### **FACULTY AUTHOR:**

Vince Markovchick, MD, FAAEM, FACEP (Past President, the American Board of Emergency Medicine / Former Chair, the Residency Review Committee, ACGME / Denver Health, University of Colorado)

### **FACULTY EDITOR:**

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

**Chapter 24: "Academic Versus Non-academic Careers in Emergency Medicine"**

RESIDENT AUTHOR:

Lillian Oshva, MD (Chair-Elect, the AAEM Women in Emergency Medicine Committee / Bellevue Hospital / New York University)

FACULTY AUTHOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

FACULTY EDITOR:

Margaret O'Leary, MD, MBA, FAAEM (AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee / Chair, the MBA Programs, Benedictine University, Illinois)

**Chapter 25: "Non-Traditional Careers in Emergency Medicine"**

RESIDENT AUTHOR:

Scott Matthew Zelasko, MS-IV (Medical College of Pennsylvania / Hahnemann School of Medicine, Philadelphia)

FACULTY AUTHOR:

William K. Mallon, MD, FAAEM, FACEP (Residency Director, University of Southern California, Los Angeles / Keck School of Medicine, Los Angeles, California)

FACULTY EDITOR:

Joe Lex, MD, FAAEM, FACEP (Chair, AAEM Education Committee / Chestnut Hill Hospital, Philadelphia)

**Chapter 26: "Urban Versus Rural Practice in Emergency Medicine"**

RESIDENT AUTHOR:

Henderson D. McGinnis, MD (Marshall University School of Medicine / Wake Forest University, North Carolina)

FACULTY AUTHOR:

Barbara Katz, BA (President, the Katz Company, Inc.)

FACULTY EDITOR:

Joe Lex, MD, FAAEM, FACEP (Chair, AAEM Education Committee / Chestnut Hill Hospital, Philadelphia)

**Chapter 27: "Ultrasonography in Emergency Medicine"**

FELLOW AUTHOR:

J. Christian Fox, MD, RDMS, FAAEM (Former Fellow in Emergency Ultrasound at Christ Hospital, Illinois / Director of Emergency Ultrasound, University of California, Irvine)

FACULTY AUTHOR:

Michael J. Lambert, MD, RDMS, FAAEM (University of Illinois / Fellowship Director, Emergency Ultrasonography, Resurrection Medical Center, Chicago)

FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Assistant Residency Director, Louisiana State University, New Orleans)

**Chapter 28: "Formal Management Training in Emergency Medicine"**

RESIDENT AUTHOR:

Jesse Pines, MD, MBA (Secretary-Treasurer-Elect, the AAEM Resident Section / University of Virginia Health Sciences)

FACULTY AUTHOR:

Margaret O'Leary, MD, MBA, FAAEM (AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee / Chair, the MBA Programs, Benedictine University, Illinois)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

## V. THE SPECIALTY OF EMERGENCY MEDICINE - AN OVERVIEW

### Chapter 29: "The History and Current State of Emergency Medicine"

## FACULTY AUTHOR:

Robert McNamara, MD, FAAEM (Immediate Past President, the American Academy of Emergency Medicine / Chairperson & Director, Temple University, Philadelphia)

## FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

### Chapter 30: "Emergency Medicine Workforce: Current Profile and Projections"

## STUDENT AUTHOR:

Rakesh Marwah, BS, MS-III (University of California, Irvine)

## FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

### Chapter 31: "Shift Work in Emergency Medicine"

## RESIDENT AUTHOR:

Julie Hopkins Hamilton, MD (Stanford University)

## FACULTY AUTHOR:

Rebecca Smith-Coggins, MD, FAAEM, FACEP (Member, the Residency Review Committee, ACGME / Residency Director, Stanford University)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

### Chapter 32: "Burnout in Emergency Medicine"

## RESIDENT AUTHOR:

Sachin J. Shah, MD (Jacobi/Montefiore Medical Center  
Albert Einstein, New York)

## FACULTY AUTHOR:

David K. Wagner MD, FAAEM, FACEP (Past President, the American Board of Emergency Medicine / Chair, MCP/Hahnemann, Philadelphia)

## FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Assistant Residency Director, Louisiana State University, New Orleans)

### Chapter 33: "Emergency Medicine Organizations and Certifying Bodies"

## RESIDENT AUTHOR:

Jeannie Tsai, MD (Founding Member & Former Vice-President, the AAEM Resident Section / Former CAL/EMRA President / Secretary-Treasurer, CAL/AAEM / University of Southern California, Los Angeles)

## FACULTY AUTHORS:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine) & Ramon W. Johnson, MD, FACEP, FAAEM (CAL/ACEP Board of Directors & Past President / Mission Hospital Regional Medical Center, Mission Viejo, California)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

**Chapter 34: "Women in Emergency Medicine"**

## RESIDENT AUTHOR:

Michelle Charfen, MD (Harvard Medical School / Harbor-UCLA Medical Center)

## FACULTY AUTHOR:

Sandra Schneider, MD, FACEP (Past President, the Society for Academic Emergency Medicine / Chair, University of Rochester, New York)

## FACULTY EDITOR:

Margaret O'Leary, MD, MBA, FAAEM (AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee / Chair, the MBA Programs, Benedictine University, Illinois)

**Chapter 35: "Minorities in Emergency Medicine"**

## RESIDENT AUTHOR:

Earl L. Miller, MD (Chief Resident, Henry Ford Hospital, Detroit)

## FACULTY AUTHOR:

Joanne Williams, MD, FAAEM (Chair, AAEM Minority Affairs Task Force / Martin Luther King, Jr./Charles R. Drew Medical Center, Los Angeles)

## FACULTY EDITOR:

Margaret O'Leary, MD, MBA, FAAEM (AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee / Chair, the MBA Programs, Benedictine University, Illinois)

**Chapter 36: "Military Track Medical Students in Emergency Medicine"**

## Resident Author:

Dan S. Mosely, MD (AAEM/RES Board of Directors / Chief Resident, San Antonio Uniformed Services Health Education Consortium, Texas)

## Faculty Author:

Robert G. Buckley, MD, MPH, FACEP (Commander, Medical Corps, US Navy / Residency Director, Naval Medical Center San Diego)

## Faculty Editor:

Carol L. Barsky, MD, FAAEM (AAEM Board of Directors / Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York)

**Chapter 37: "Osteopaths and Emergency Medicine"**

## RESIDENT AUTHOR:

Michael A. LoGuidice, DO (AAEM/RES Vice-President / Memorial Hospital, York, Pennsylvania)

## FACULTY AUTHOR:

David A. Wald, DO, FAAEM, FACOEP (Assistant Residency Director & Co-Director EM Clerkship, Temple University, Philadelphia)

## FACULTY EDITORS:

Carol L. Barsky, MD, FAAEM (AAEM Board of Directors / Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York)

### **Chapter 38: "International Medical Graduates and Emergency Medicine"**

RESIDENT AUTHOR:

Ziad N. Kazzi, MD (Chief Resident, Emory University)

FACULTY AUTHOR:

Christopher Lewandowski, MD, FAAEM, FACEP (Residency Director, Henry Ford Hospital System) & Trena Adams, BS (Immigration Division, Legal Affairs, Henry Ford Health System)

FACULTY EDITOR:

Carol L. Barsky, MD, FAAEM (AAEM Board of Directors / Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York)

### **Chapter 39: "Gay and Lesbian Issues in Emergency Medicine"**

RESIDENT AUTHOR:

Christopher Souders, MD (University of Rochester, New York)

FACULTY AUTHOR:

Linda L. Spillane, MD (Residency Director, University of Rochester, New York)

FACULTY EDITOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Residency Director, Louisiana State University, New Orleans)

### **Chapter 40: "How to Deal with Illness, Disability and Unexpected Crisis During Medical School and Residency"**

RESIDENT AUTHOR:

Christopher Sterrett, MD (University of Southern California, Los Angeles)

FACULTY AUTHOR:

Carol L. Barsky, MD, FAAEM (AAEM Board of Directors / Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York)

FACULTY EDITOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Residency Director, Louisiana State University, New Orleans)

### **Chapter 41: "Pregnancy During Medical School and Residency"**

RESIDENT AUTHOR:

Jeannie Tsai, MD (Founding Member & Former Vice-President, the AAEM Resident Section / Former CAL/EMRA President / Secretary-Treasurer, CAL/AAEM / University of Southern California, Los Angeles)

FACULTY AUTHOR:

Margaret O'Leary, MD, MBA, FAAEM (AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee / Chair, the MBA Programs, Benedictine University, Illinois)

FACULTY EDITOR:

Carol L. Barsky, MD, FAAEM (AAEM Board of Directors / Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York)

### **Chapter 42: "Drug and Alcohol Use During Medical School and Residency Training"**

RESIDENT AUTHOR:

Tobey Williams, MD (Immediate Past-President, the AAEM Resident Section / Chief Resident, Louisiana State University, New Orleans)

FACULTY AUTHOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Residency Director, Louisiana State University, New Orleans)

FACULTY EDITOR:

David A. Wald, DO, FAAEM, FACOEP (Assistant Residency Director & Co-Director EM Clerkship, Temple University, Philadelphia)

### **Chapter 43: "International Emergency Medicine: An Overview"**

RESIDENT AUTHOR:

Janna Welch, MD (University of Virginia School of Medicine / Louisiana State University)

FACULTY AUTHOR:

Philip Shayne, MD, FACEP (Residency Director, Emory University)

FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

### **Chapter 44: "Ethical Duties and Obligations in Emergency Medicine: An Overview"**

RESIDENT AUTHOR:

Donald N. Janes Jr, MD, PhD (Loma Linda University, Loma Linda)

FACULTY AUTHOR:

Gregory L. Larkin, MD, MSPH, MS, FACEP (Professor of Emergency Medicine and Public Health / Director of Academic Development, The University of Texas, Southwestern Medical Center at Dallas, Parkland Memorial Hospital)

FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

### **Chapter 45: "Mentorship in Emergency Medicine"**

RESIDENT AUTHOR:

Rasha Hindiyyeh, MSI (University of California, Irvine)

FACULTY AUTHOR:

Gregory L. Larkin, MD, MSPH, MS, FACEP (Professor of Emergency Medicine and Public Health / Director of Academic Development, The University of Texas, Southwestern Medical Center at Dallas, Parkland Memorial Hospital)

FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

## **VI. POLITICAL CONTROVERSY IN EMERGENCY MEDICINE - AN OVERVIEW**

### **Chapter 46: "Political Controversy in Emergency Medicine: An Overview"**

RESIDENT AUTHOR:

Joel M Schofer, MD (Secretary-Treasurer, Former Medical Student Representative, the AAEM Resident Section / Naval Medical Center, San Diego)

FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)



### **Chapter 47: "Alternative Providers and Qualifications in the Workforce"**

RESIDENT AUTHOR:

Jason May, MD (President-Elect, the AAEM Resident Section / University of Indiana, Indianapolis)

FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / President, Chicagoland Emergency Physicians / Chair, West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

### **Chapter 48: "Greed in Emergency Medicine: The Enemy Within"**

STUDENT AUTHOR:

Brian Potts, MSIV, MBA Candidate (Board of Directors and Medical Student Representative, the AAEM Resident Section / University of California, Irvine)

FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

FACULTY EDITOR:

Robert McNamara, MD, FAAEM (Immediate Past President, the American Academy of Emergency Medicine / Chairperson & Director, Temple University, Philadelphia)

## **VI. CONCLUSION**

### **Chapter 49: "The Future of Emergency Medicine"**

RESIDENT AUTHOR:

Tobey Williams, MD (Immediate Past-President, the AAEM Resident Section / Chief Resident, Louisiana State University, New Orleans)

FACULTY AUTHOR:

Joseph P. Wood, MD, JD, FAAEM, FACEP (AAEM President/ Senior Associate Consultant, Mayo Clinic, Scottsdale, Arizona)

FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)



## Resident, Fellow & Student Authors

### **Paul Alleyne, MD**

Temple University, Philadelphia, Pennsylvania

### **Kevin M. Ban, MD**

Harvard Affiliated Emergency Medicine Residency at  
Beth Israel Deaconess, Boston, Massachusetts

### **Joshua Broder, MD, Chief Resident**

University of Maryland, Baltimore, Maryland

### **Eric C. Bruno, MD**

Medical College of Pennsylvania  
MCP/Hahnemann University, Philadelphia, Pennsylvania

### **Michelle Charfen, MD**

Harvard Medical School  
Harbor-UCLA Medical Center, Torrance, California

### **Kyran Colbry, MD**

Oregon Health Sciences University School of Medicine  
University of Connecticut EM Residency Program, Hartford, Connecticut

### **Robert W. Collins, MD**

Indiana University School of Medicine, Indianapolis, Indiana

### **Ann C. Collins, MD**

Family Physician, Cornerstone Family Physicians, Indianapolis, Indiana

### **Adrian Crisan, MD**

Martin Luther King/Charles R. Drew Medical Center, Los Angeles, California

### **Amir Hootan Darvish, MA, MD**

Henry Ford Hospital, Detroit, Michigan

### **J. Christian Fox, MD, RDMS, FAAEM**

Former Fellow in Emergency Ultrasound at Christ Hospital, Illinois  
Director of Emergency Ultrasound & Assistant Clinical Professor  
Department of Emergency Medicine  
University of California, Irvine, California

### **Fred Goodwin, Jr, MD**

Georgetown University School of Medicine  
Albany Medical Center, Albany, New York

### **Julie Hopkins Hamilton, MD**

Stanford University, Palo Alto, California

### **David T. Huang, MD**

Founding Member & Fellow Representative, AAEM/RES Board of Directors  
Multidisciplinary Critical Care Fellow, University of Pittsburgh  
Residency Class 2001, Henry Ford Hospital, Detroit, Michigan

### **Cherlin Johnson, MS-IV**

Member-Elect, AAEM/RES Board of Directors  
University of California, Irvine, College of Medicine, Irvine, California

### **Ziad N. Kazzi, MD, Chief Resident**

Emory University, Atlanta, Georgia

**Barbara L. Keller, JD, MS-IV**

Louisiana State University Health Science Center  
New Orleans, Louisiana

**Luan E. Lawson, MD**

Former Member, AAEM/RES Board of Directors  
East Carolina University, Greenville, North Carolina

**Michael A. LoGuidice, DO**

Vice-President, the AAEM Resident Section  
Memorial Hospital, York, Pennsylvania

**Shahram Lotfipour, MD**

Founding Member, AAEM/RES Board of Directors,  
Vice-President, the California Chapter of the American Academy of Emergency  
Medicine, Director of Undergraduate Education, Department of Emergency Medicine  
University of California, Irvine  
Residency Class 2001, Henry Ford Hospital, Detroit, Michigan

**Boris V. Lubavin, MD**

University of California, Irvine, College of Medicine  
UC Irvine EM residency Program, Irvine, California

**Joseph P. Martinez, MD**

Combined Emergency Medicine / Internal Medicine Residency Program  
Assistant Clinical Professor of Emergency Medicine  
University of Maryland Medical System, Baltimore, Maryland

**Rakesh Marwah, BS, MS-III**

University of California, Irvine, College of Medicine, Irvine, California

**Jason May, MD**

President-Elect, The AAEM Resident Section/University of Indiana, Indianapolis

**Henderson D. McGinnis, MD**

Marshall University School of Medicine  
Wake Forest University Baptist Medical Center, Winston-Salem, North Carolina

**Earl L. Miller, MD, Chief Resident**

Henry Ford Hospital, Detroit, Michigan

**Dan S. Mosely, MD, Chief Resident**

AAEM/RES Board of Directors  
San Antonio Uniformed Services Health Education Consortium, San Antonio, Texas

**Lillian Oshva, MD**

Chair-Elect of the AAEM Women in Emergency Medicine Committee  
Assistant Clinical Professor, Mount-Sinai Medical Center, New York  
Class of 2002, Bellevue Hospital/New York University Medical Center, New York, New  
York

**Kenneth Park, MS-IV**

Medical Student Representative & Member-Elect, AAEM/RES Board of Directors  
University of Southern California, Keck School of Medicine  
Los Angeles, California

**Jesse Pines, MD, MBA**

Secretary-Treasurer-Elect, the AAEM Resident Section  
University of Virginia Health Sciences Center, Virginia

**Georges A. Ralls, MD, Chief Resident**

Orlando Regional Medical Center, Orlando, Florida

**Joel M. Schofer, MD**

Secretary-Treasurer & Former Student Representative  
 The AAEM Resident Section  
 MCP Hahnemann School of Medicine  
 Naval Medical Center San Diego, San Diego, California

**Sachin J. Shah, MD**

Jacobi Medical Center/Montefiore Medical Center  
 Albert Einstein, Bronx, New York

**Christopher Sterrett, MD**

USC/LAC Medical Center, University of Southern California Keck School of Medicine,  
 Los Angeles, California

**Chris Souders, MD**

University of Rochester Medical Center, Rochester, New York

**Jeannie Tsai, MD**

Former Vice President and Founding Member, the AAEM Resident Section  
 Former CAL/EMRA President  
 USC/LAC Medical Center, University of Southern California Keck School of Medicine,  
 Los Angeles, California

**Nicole M. Wakim, BA, MS-IV**

Loyola University, Chicago  
 Stritch School of Medicine, Maywood, Illinois

**Scott G. Weiner, MD**

President, Founding Member and Former Medical Student Representative  
 The AAEM Resident Section  
 Harvard Affiliated Emergency Medicine Residency at Beth Israel Deaconess  
 Boston, Massachusetts

**Janna Welch, MD**

University of Virginia School of Medicine  
 Louisiana State University EM Residency, New Orleans, Louisiana

**Tobey Williams, MD**

Immediate Past-President, the AAEM Resident Section  
 Chief Resident, Louisiana State University EM Residency, New Orleans, Louisiana

**Michael E. Winters, MD**

Resident-Combined Emergency/Internal Medicine Program  
 University of Maryland Medical System, Baltimore, Maryland

**Bradley N. Younggren, MD**

Madigan Army Medical Center/University of Washington  
 Tacoma, Washington

**Scott Matthew Zelasko, MS-IV**

MCP Hahnemann School of Medicine, Philadelphia, Pennsylvania

## Resident Editors

**Chief Editor:**

Joel M. Schofer, MD  
 Secretary-Treasurer & Former Student Representative  
 The AAEM Resident Section  
 MCP Hahnemann School of Medicine  
 Naval Medical Center San Diego, San Diego, California

**Editors:****Shahram Lotfipour, MD**

Founding Member, AAEM/RES Board of Directors

Vice-President, the California Chapter of the American Academy of Emergency Medicine, Director of Undergraduate Education, Department of Emergency Medicine University of California, Irvine

Residency Class 2001, Henry Ford Hospital, Detroit, Michigan

**Scott E. Rudkin, MD**

Past President, CAL/EMRA

Marketing Editor, California Journal of Emergency Medicine, CAL/AAEM

Medical Informatics Fellow & Assistant Clinical Professor of Emergency Medicine

University of California, Irvine, California

**Joel M. Schofer, MD**

Secretary-Treasurer & Former Student Representative

The AAEM Resident Section

MCP Hahnemann School of Medicine

Naval Medical Center San Diego, San Diego, California

**Jeannie Tsai, MD**

Former Vice President and Founding Member, the AAEM Resident Section

Former CAL/EMRA President

USC/LAC Medical Center, University of Southern California Keck School of Medicine, Los Angeles, California

**Scott G. Weiner, MD**

President, Founding Member and Former Medical Student Representative

The AAEM Resident Section

Harvard Affiliated Emergency Medicine Residency at Beth Israel Deaconess

Boston, Massachusetts

**Tobey Williams, MD**

Immediate Past-President, the AAEM Resident Section

Chief Resident, Louisiana State University EM Residency, New Orleans, Louisiana

## Faculty Authors

**Trenna Adams, BS**

Senior Representative & Alternate Responsible Officer

Immigration Division, Legal Affairs

Henry Ford Health System, Detroit, Michigan

**Felix Ankel, MD, FAAEM, FACEP**

Residency Director & Assistant Professor of Emergency Medicine

Regions Hospital, Saint Paul, Minnesota

University of Minnesota Medical School, Minnesota

**Carol L. Barsky, MD, FAAEM**

AAEM Board of Directors

Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York

**Deana Baudonnet, MD**

Assistant Professor of Emergency Medicine

Charles R. Drew University of Medicine and Science

Martin Luther King, Jr./Charles R. Drew Medical Center, Los Angeles, California

**Louis Binder, MD, FACEP**

Past President, the Society for Academic Emergency Medicine  
 Professor, Case Western Reserve University  
 Director of Education, Department of Emergency Medicine  
 Metro Health Medical Center, Cleveland, Ohio

**Howard Blumstein, MD, FAAEM**

AAEM Board of Directors  
 Former Assistant Residency Director at Wake Forest University & the Medical College of Pennsylvania  
 Medical Director & Assistant Professor of Emergency Medicine  
 Wake Forest University, North Carolina

**Robert G. Buckley, MD, MPH, FACEP**

Commander, Medical Corps, US Navy  
 Residency Director, Department of Emergency Medicine  
 Naval Medical Center San Diego  
 Associate Clinical Professor of Medicine  
 University of California, San Diego School of Medicine

**Carey D. Chisholm, MD, FAAEM**

SAEM Board of Directors  
 Former President, the Council of Residency Directors  
 Clinical Professor of Emergency Medicine  
 Director, Emergency Medicine and Combined EM-Pediatrics Residencies  
 Indiana University School of Medicine, Indianapolis, Indiana

**Wendy C. Coates, MD, FACEP**

Director of Education & Associate Professor  
 Harbor-UCLA Medical Center, Department of Emergency Medicine  
 UCLA School of Medicine, Los Angeles, California

**Peter M.C. DeBlieux, MD, FAAEM, FACEP**

Residency Director & Professor of Clinical Medicine  
 LSUHSC Emergency Medicine Residency, Section of Emergency Medicine  
 Louisiana State University Health Science Center at New Orleans, Louisiana

**Pamela L. Dyne, MD, FAAEM, FACEP**

Board of Directors, the Council of Residency Directors  
 Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California  
 Program Director, UCLA / Olive View-UCLA, Emergency Medicine Residency Program  
 Co-Director, UCLA / Olive View-UCLA Emergency Medicine and Internal Medicine  
 Combined Residency Program

**Gus M. Garmel, MD, FAAEM, FACEP**

Co-Program Director, Stanford/Kaiser Emergency Medicine Residency  
 Senior Staff Emergency Physician, the Permanente Medical Group  
 Associate Clinical Professor of Emergency Medicine  
 Stanford University School of Medicine, Stanford, California

**Micelle J. Haydel, MD, FAAEM**

Assistant Residency Director & Assistant Clinical Professor  
 LSUHSC Emergency Medicine Residency, Section of Emergency Medicine  
 Louisiana State University Health Science Center at New Orleans, Louisiana

**Jerris R. Hedges, MD, MS, FAAEM**

Former President, Society for Academic Emergency Medicine  
 Chair and Professor, Department of Emergency Medicine  
 The Oregon Health & Sciences University, Portland, Oregon

**Ramon W. Johnson, MD, FACEP, FAAEM**

California ACEP Board of Directors, Member & Former President  
 Director of Pediatric Emergency Medicine  
 Mission Hospital Regional Medical Center & Children's Hospital at Mission  
 Mission Viejo, California

**Barbara Katz, BA**

President, the Katz Company, Inc.  
 Contributing Editor  
 Emergency Physicians' Monthly

**A. Antoine Kazzi, MD, FAAEM, FACEP**

Vice-President, the American Academy of Emergency Medicine  
 President, California Chapter, the American Academy of Emergency Medicine  
 Board of Directors, California Chapter, the American College of Emergency Physicians  
 Vice-Chair & Associate Professor of Clinical Emergency Medicine  
 Department of Emergency Medicine  
 University of California, Irvine, California

**Jennifer A. Krawczyk Oman, MD, FAAEM, FACEP**

Residency Director & Assistant Clinical Professor  
 Department of Emergency Medicine  
 University of California, Irvine

**Michael J. Lambert, MD, RDMS, FAAEM**

Clinical Assistant Professor, Department of Emergency Medicine  
 University of Illinois College of Medicine  
 Fellowship Director, Emergency Ultrasonography  
 Resurrection Medical Center, Chicago, Illinois

**Gregory L. Larkin, MD, MSPH, MS, FACEP**

Professor of Emergency Medicine and Public Health  
 Director of Academic Development  
 The University of Texas, Southwestern Medical Center at Dallas  
 Parkland Memorial Hospital, Dallas, Texas

**Christopher Lewandowski, MD, FAAEM, FACEP**

Assistant Professor, Case Western Reserve University, Cleveland, Ohio  
 Residency Director, Department of Emergency Medicine  
 Henry Ford Hospital, Detroit, Michigan

**William K. Mallon, MD, FAAEM, FACEP**

Residency Director & Associate Professor of Emergency Medicine  
 Department of Emergency Medicine  
 USC/LAC Medical Center, University of Southern California  
 Keck School of Medicine, Los Angeles, California

**Vince Markovchick, MD, FAAEM, FACEP**

Former President, the American Board of Emergency Medicine  
 Former chair, the Residency Review Committee, ACGME  
 Professor & Director of Emergency Medical Services, Denver Health  
 University of Colorado, Denver, Colorado

**Daniel R. Martin, MD, FAAEM, FACEP**

Chair of the Graduate Medical Committee, the Council of Residency Directors  
 Associate Professor & Residency Director  
 Ohio State University Medical Center, Columbus, Ohio



**Amal Mattu, MD, FAAEM, FACEP**

Maryland ACEP Board of Directors

Co-Director, Emergency Medicine/Internal Medicine Combined Program

Director of Academic Development & Assistant Professor of Emergency Medicine

University of Maryland School of Medicine, Baltimore, Maryland

**Robert McNamara, MD, FAAEM**

Immediate Past President, the American Academy of Emergency Medicine

Professor, Chairperson & Director

Department of Emergency Medicine

Temple University School of Medicine, Philadelphia, Pennsylvania

**Margaret O'Leary, MD, MBA, FAAEM**

AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee

Chair and Associate Professor, the MBA Programs

College of Business, Technology, and Professional Programs

Benedictine University, Illinois

**Peter Rosen, MD, FAAEM, FACEP, FACS**

Chief Editor, Journal of Emergency Medicine

Attending Physician, St. John's Hospital Jackson, Wyoming

Board of Directors, AAEM California Chapter

Clinical Professor of Medicine & Surgery

Residency Director Emeritus, Division of Emergency Medicine

University of California San Diego, San Diego, California

**Steven G. Rothrock, MD, FAAEM, FAAP, FACEP**

Clinical Associate Professor of Emergency Medicine

Orlando Regional Medical Center, Orlando, Florida

University of Florida College of Medicine, Gainesville, Florida

**Tom Scaletta, MD, FAAEM**

Secretary-Treasurer, the American Academy of Emergency Medicine

Chairperson, Department of Emergency Medicine

West Suburban Health Care, Oak Park, Illinois

Assistant Professor of Emergency Medicine, Rush/Cook County Hospital

Chief Editor, Rules of the Road for Residents

**Sandra Schneider, MD, FACEP**

Former President of the Society for Academic Emergency Medicine

Chair & Professor, Department of Emergency Medicine

University of Rochester Medical College, Rochester, New York

**Philip Shayne, MD, FACEP**

Residency Director & Assistant Professor

Department of Emergency Medicine

Emory University School of Medicine, Atlanta, Georgia

**Rebecca Smith-Coggins, MD, FAAEM, FACEP**

Member, the Residency Review Committee, ACGME

Residency Director & Associate Professor, Emergency Medicine

Stanford University School of Medicine, Stanford, California

**Linda L. Spillane, MD**

Residency Director & Associate Professor of Emergency Medicine

Department of Emergency Medicine

University of Rochester, Rochester, New York

**Susan Stone, MD, MPH**

Assistant Clinical Professor & Associate Residency Director  
 Department of Emergency Medicine  
 USC/LAC Medical Center, University of Southern California  
 Keck School of Medicine, Los Angeles, California

**Phyllis A. Vallee, MD, FAAEM**

Assistant Professor, Case Western Reserve University, Cleveland, Ohio  
 Associate Residency Director, Department of Emergency Medicine  
 Henry Ford Hospital, Detroit, Michigan

**David K. Wagner MD, FAAEM, FACEP**

Former President, the American Board of Emergency Medicine  
 Professor & Chair, Department of Emergency Medicine  
 MCP/Hahnemann School of Medicine  
 Philadelphia, Pennsylvania

**David A. Wald, DO, FAAEM, FACOEP**

Assistant Residency Director & Assistant Clinical Professor  
 Co-Director Emergency Medicine Clerkship  
 Department of Emergency Medicine  
 Temple University Hospital, Philadelphia, Pennsylvania

**Joanne Williams, MD, FAAEM**

Chair, AAEM Minority Affairs Task Force  
 Assistant Professor, Career Academic Series  
 Charles R. Drew University of Medicine & Science  
 Martin Luther King, Jr./Charles R. Drew Medical Center, Los Angeles, California

**Richard E. Wolfe, MD, FAAEM, FACEP**

Chief of Emergency Medicine & Assistant Professor of Medicine  
 Beth Israel Deaconess Medical Center  
 Harvard Medical School, Boston, Massachusetts

**Robert W. Wolford, MD, FACEP**

Associate Professor & Residency Director in Emergency Medicine  
 Saginaw Cooperative Hospitals / Michigan State University  
 Michigan State University College of Human Medicine, East Lansing, Michigan

**Joseph P. Wood, MD, JD, FAAEM, FACEP**

President, the American Academy of Emergency Medicine  
 Assistant Clinical Professor, University of Illinois  
 Senior Associate Consultant, Department of Emergency Medicine  
 Mayo Clinic, Scottsdale, Arizona

## Faculty Editors

**Chief Editor:****A. Antoine Kazzi, MD, FAAEM, FACEP**

Vice-President, the American Academy of Emergency Medicine  
 President, California Chapter, the American Academy of Emergency Medicine  
 Board of Directors, California Chapter, the American College of Emergency Physicians  
 Vice-Chair & Associate Professor of Clinical Emergency Medicine  
 Department of Emergency Medicine  
 University of California, Irvine, California

## Faculty Editors:

### **Carol L. Barsky, MD, FAAEM**

AAEM Board of Directors

Vice-Chair & Medical Director, Mount-Sinai Medical Center, New York

### **Peter M.C. DeBlieux, MD, FAAEM, FACEP**

Residency Director & Professor of Clinical Medicine

LSUHSC Emergency Medicine Residency, Section of Emergency Medicine

Louisiana State University Health Science Center at New Orleans, Louisiana

### **Pamela L. Dyne, MD, FAAEM, FACEP**

Board of Directors, the Council of Residency Directors

Associate Professor, David Geffen School of Medicine at UCLA, Los Angeles, California

Program Director, UCLA / Olive View-UCLA, Emergency Medicine Residency Program

Co-Director, UCLA / Olive View-UCLA Emergency Medicine and Internal Medicine

Combined Residency Program

### **Micelle J. Haydel, MD, FAAEM**

Assistant Residency Director & Assistant Clinical Professor

LSUHSC Emergency Medicine Residency, Section of Emergency Medicine

Louisiana State University Health Science Center at New Orleans, Louisiana

### **A. Antoine Kazzi, MD, FAAEM, FACEP**

Vice-President, the American Academy of Emergency Medicine

President, California Chapter, the American Academy of Emergency Medicine

Board of Directors, California Chapter, the American College of Emergency Physicians

Vice-Chair & Associate Professor of Clinical Emergency Medicine

Department of Emergency Medicine

University of California, Irvine, California

### **Mark I. Langdorf, MD, MHPE, FAAEM, FACEP**

Chair, Medical Director & Associate Residency Director

Associate Professor of Clinical Emergency Medicine

Department of Emergency Medicine

University of California, Irvine

### **Joe Lex, MD, FAAEM, FACEP**

Chair, AAEM Education Committee

Chestnut Hill Hospital, Philadelphia, PA

### **Amal Mattu, MD, FAAEM, FACEP**

Maryland ACEP Board of Directors

Co-Director, Emergency Medicine/Internal Medicine Combined Program

Director of Academic Development & Assistant Professor of Emergency Medicine

University of Maryland School of Medicine, Baltimore, Maryland

### **Margaret O'Leary, MD, MBA, FAAEM**

AAEM Board of Directors & Chair of the Women in Emergency Medicine Committee

Chair and Associate Professor, the MBA Programs

College of Business, Technology, and Professional Programs

Benedictine University, Illinois

### **Tom Scaletta, MD, FAAEM**

Secretary-Treasurer, the American Academy of Emergency Medicine

President, Chicagoland Emergency Physicians

Chairperson, Department of Emergency Medicine

West Suburban Health Care, Oak Park, Illinois

Assistant Professor of Emergency Medicine, Rush/Cook County Hospital

Chief Editor, Rules of the Road for Residents

**David A. Wald, DO, FAAEM, FACOEP**

Assistant Residency Director & Assistant Clinical Professor

Co-Director Emergency Medicine Clerkship

Department of Emergency Medicine

Temple University Hospital, Philadelphia, Pennsylvania

## Preface

### The Origin of This Textbook

Nearly 2 years ago, one of the most dynamic student members, my co-Editor-in-Chief, Joel Schofer, suggested to our American Academy of Emergency Medicine (AAEM) Resident Section (AAEM/RES) board that volunteers - both residents and faculty - develop a career guide for medical students who are considering the specialty of Emergency Medicine (EM). Joel wanted to provide a useful resource to students, which, the AAEM/RES board envisioned, would serve to introduce the AAEM Mission and Vision statements to medical students - our future EM residents, members and leaders.

Within 6 months, the Academy and its Resident Section were embarked on developing a book by residents for the future EM residents, and planning for roughly 20 chapters. This publication was the first such undertaking by our resident section. We pooled ideas and researched the literature, coming up with topics and soliciting input from the EM academic leadership. Our resident authors and editors met the challenge with the most genuine degree of enthusiasm, committed to provide the emergency physicians (EPs) of the future with an exceptionally comprehensive resource. Residents, students and faculty alike, the authors and editors discovered, in this publication, the complexity of the challenges associated with applying, training and practicing in our field. By the middle of the second year of completion, this project had naturally grown beyond our initial plans, scope and expectations, to include over 49 chapters, blending the basic and the controversial issues of our specialty.

We gave it our best shot, and generated a product that we believe is useful and inspiring to all EM applicants, residents, academic faculty and community EPs alike. We hope that you will agree.

### Dedicating This Textbook

This textbook gave me an exceptional opportunity to work closely with a very talented team. However, the most remarkable aspect of this project has been and will remain embedded in the lifetime opportunity I had to witness young editors and authors working closely with the mothers, fathers and rising stars of our specialty. I find it, therefore, natural to dedicate this textbook to the folks who themselves inspired me the most, to all the members of the Council of EM Residency Directors (CORD), the Society for Academic Emergency Medicine (SAEM), the Emergency Medicine Resident Association (EMRA), the American College of Emergency Physicians (ACEP), the Association of Academic Chairs of Emergency Medicine (AACEM), and the American Academy of Emergency Medicine (AAEM) who have given their lives and sacrificed family time and well being to establish and develop the specialty of EM, and in par-

ticular to the ones who hold dear and promote the same values that were behind the establishment of AAEM.

**Conclusion**

In summary, our dear readers, we hope you will enjoy this career guide, and hope that it will help secure your support and perhaps to get you involved in AAEM. Your active participation, talent and energy are vital, most welcomed, and necessary.

A. Antoine Kazzi, MD, FAAEM, FACEP, Editor-in-Chief  
Vice-President, the American Academy of Emergency Medicine

### Acknowledgement

There are a few people who deserve special recognition for their contribution to this work. I give special thanks to Dr. A. Antoine Kazzi, my Co-Editor-In-Chief, for his tireless effort, addressing the needs and challenges we faced developing this textbook. Without him, this book would not have been possible. I wish to also thank Ms. Kay Whalen, our AAEM Executive Director, for her outstanding reliability and precious assistance to us. She has certainly made my life much easier during my two years of involvement in this project and in the AAEM Resident Section. Mr. Ken Janowski's (another AAEM staff member) outstanding contribution as our grammar editor was invaluable and does not go unappreciated.

In the past, I often wondered why the authors and editors of the books that I have read took time to acknowledge their families and loved ones. Now, as my first book reaches publication, I truly understand the way they felt.

I thank my daughter Erin and my wife Wendy for the sacrifice they made, giving me the time I needed to edit and write, staring at a computer screen, instead of spending it with them. Most of all, I wish to thank my wife for sharing with me two years of excitement, hard work, and challenge, and in particular for those moments when she had to listen to any degree of frustration that I may have had. Thank you Wendy for being there, the way you always are, with gentle understanding and no complaint. I look forward to a lifetime of happiness with both of you.

Joel M. Schofer, MD  
Editor-In-Chief





## Introduction

### RESIDENT AUTHOR:

Joel M. Schofer, MD (Secretary-Treasurer, Former Medical Student Representative, the AAEM Resident Section / Naval Medical Center, San Diego)

### FACULTY AUTHOR:

Robert McNamara, MD, FAAEM (President, the American Academy of Emergency Medicine / Chairperson & Director, Temple University, Philadelphia)

### FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

To All Medical Students Interested in Emergency Medicine,

The Resident Section of the American Academy of Emergency Medicine (AAEM/RES) is proud to present *Rules of the Road for Medical Students*, written by students, residents and fellows for students interested in the dynamic field of emergency medicine (EM). Modeled after the AAEM's no-nonsense publication for residents, *Rules of the Road for Emergency Medicine Residents and Graduates*, the student edition is meant to guide you from the first day of medical school to your first day, as a resident in an EM residency program, and beyond, as you develop a successful career as a practicing emergency physician.

Each chapter is written by a student, a resident or a fellow author who undoubtedly wrestled with many of the same problems you have faced during medical school, asked many of the same questions you are now asking. Each one of these chapters was co-authored and then edited by three prominent EM faculty members. They worked hand in hand with our residency section members, guiding them to provide you with talent, vision and expertise in the final product.

The forty-nine chapters contained in this publication discuss topics that are important to medical students interested in EM. These topics include some of the most controversial in the field, such as the current state and future of EM, moonlighting during residency, and the alphabet soup of the various EM professional organizations. A broad range of topics, from the management of personal finances during medical school to gender and minority issues in EM, is covered in an attempt to meet the needs of every medical student exploring the field of EM.

The AAEM/RES was the first EM resident organization to insist that all patients deserve to have a board certified emergency physician directing their care. This position is core to our mission and vision statements. The AAEM/RES and AAEM are also dedicated to increasing physician ownership of EM practice and to improving the work environment of the practicing emergency

physician. We want the future generations of medical students to benefit from this publication and to learn about these and other critical issues facing emergency physicians. We hope that readers of this publication will experience a smoother transition through medical school to residency training and then to successful and fulfilling careers as practicing emergency physicians.

## 1

The Match:  
An Overview

## RESIDENT AUTHOR:

Joshua Broder (University of Maryland)

## FACULTY AUTHOR:

Pam Dyne, MD, FAAEM, FACEP (UCLA/Olive View-UCLA)

## EDITOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

Matching for residency may seem one of the most daunting processes you have faced along the difficult path to becoming a physician. You have agonized over your choice of college and medical school, conquering difficult and exhausting standardized tests to stand where you are today. And now you must not only choose a specialty for the rest of your professional life based on very limited exposure in medical school, but also decide where in the country you want to live and potentially practice. Your success and happiness hang in the balance.

Relax. You have already succeeded, and you are about to embark on the most exciting, challenging, and rewarding part of your medical career thus far. Matching for residency today is about choosing a field that will stimulate you for the rest of your life, and the process is less difficult than it may first appear. In the chapters that follow, we shall take you through the details of the **Match** and address important aspects of your chosen career in emergency medicine (EM). But first, let us take a more global view of the road ahead.

We shall start with the numbers. In the year 2002, 125 allopathic programs offered 1,211 EM positions, the highest number ever. This included 1073 'post-graduate year 1' (PGY-1) and 138 PGY-2 entry positions, and made up 5.3% of the total National Residency Matching Program (NRMP) positions.<sup>1</sup> Completion of training requirements in one of these programs qualifies graduates to sit for the certification process that is administered by the American Board of EM (ABEM) on behalf of the American Board of Medical Specialties (ABMS). Of these PGY-1 spots, 1186 (98%) were filled, nearly matching the 99.5% record set in 2000. Emergency medicine was once again second highest of any specialty in the 2002 Match.<sup>1</sup> In addition to these allopathic spots, roughly 20 osteopathic EM residency programs offered nearly 160 positions that qualify their graduates for board certification in EM by the American Osteopathic Board of EM (AOBEM). ABEM and AOBEM are both nationally recognized as the only legitimate accredited certifying bodies for specialty certification in

EM. For additional detail on the selection process used to match in an osteopathic residency program, please refer to Chapter 37 in this textbook ("Osteopaths and EM"). Admittedly, for both the osteopathic and allopathic tracks, EM is a competitive field, but the numbers do not define an impossible task. Consistently, less than 7% of US seniors were unable to match in EM. Your interest in EM defines you as a capable and enthusiastic candidate, and you should approach the Match with optimism.

### WHAT IS "THE MATCH"?

The '*Match*', short for the National Resident Matching Program (NRMP), is the nationally accepted, unified process through which applicants for residency positions are placed with their preferred **allopathic programs**. Eligible applicants include senior students and graduates of: 1) US allopathic and osteopathic medical schools; 2) Canadian medical schools; and 3) foreign medical schools who have been certified by the Educational Commission for Foreign Medical Education (ECFMG).

Most, but not all specialties, participate in the NRMP; EM does. Check with your student affairs office for an updated list. Prior to 1951, residency application was an unregulated process that granted superior bargaining power to residency programs at the expense of applicants. At that time, an applicant could even be forced to accept or refuse a position at his or her initial interview. Today, a computer algorithm matches applicants and programs based on the preferences they each have. As recently as 1996, this process was weighted slightly to the benefit of residency programs. Today, the algorithm favors *you*, the applicant.<sup>2</sup>

How and when will you apply to residency programs? For most programs, you will begin to fill out a common electronic application in the fall of your fourth year of medical school. You will submit your application to your medical school's student affairs department, which will forward it to NRMP and from there to your selected programs. Your Dean's letter will be sent with your application on November 1. Soon thereafter, you will receive invitations to interview with programs; these interviews are typically offered in November, December, and January.<sup>2</sup>

After you have completed all of your interviews, you will be asked to rank programs with which you would like to match. This rank order list, due in February of your fourth year, should reflect your true preferences in descending order. Remember the process is designed to place you where *you* want to be. Programs will submit similar lists of their preferred applicants. In mid March, at noon Eastern Standard Time on "**Match Day**," you and other medical students nationwide will open envelopes revealing your one and only match. Unlike college and medical student application processes, you will not receive accep-

tances from multiple programs. You will have signed an agreement in advance to attend the one program selected by the Match.<sup>2</sup>

In the unlikely event that you do not match with any of the programs on your preference list, you will be notified two days prior to Match Day. Then on the day prior to Match Day, together with your medical school dean, you will call programs with available positions. This process is known as “the Scramble,” and is apparently less pleasant than the Match.<sup>2</sup> Please refer to chapter 14 in this textbook for additional details on “Scrambling for a Spot & Going *outside* the Match.”

### HOW WILL YOU APPLY TO EM PROGRAMS?

Fortunately, EM now participates in the Electronic Residency Application Program (ERAS), dramatically simplifying the application process for the Match. Using a computer application, you will fill out your demographic information a single time rather than struggling to jam a dozen different thick cardboard forms through your roommate’s 1983 electric typewriter. Your Dean’s Letter, personal statement, and recommendation letters will also be electronically entered, and you can easily mix and match different letters for different programs if you so desire. And since transmission is electronic, you can push the deadline red-zone if you wish (we do not recommend this).

How easy is all of this in practice?

In the fall of my (J. Broder) fourth year of medical school, after submitting my applications in *internal medicine*, I discovered to my surprise during an elective in my school’s emergency department that I liked controlled chaos, the variety and excitement of EM. In fact, after only three shifts, I withdrew my applications and reapplied in EM. Even though I was a late applicant, I was able to get the whole application in on time and get my interviews scheduled without problems. In other words, lay to rest any fears about the application process itself.

Today, the ease of the ‘Match’ process may tempt you to apply to every program nationwide, driven by the rumors your classmates will eagerly provide about a brilliant and hardworking friend who was rejected by all thirty programs to which he or she had applied. Instead, take a deep breath, step back, and think about the months and years ahead. Every EM residency program meets high standards for academic and clinical training. You *will* be eligible for board certification regardless of the program you graduate from, and life will not end if that program is not your first choice. On the other hand, some programs may not meet specific personal goals and requirements unique to *you*. If you are a New York native who has hated every moment of the last four years at your west coast medical school, maybe it is time to head east. Do not feel obligated to apply to western residency programs. If your significant other

is a Northwesterner who cannot bear the thought of grits for breakfast, steer clear of southern programs. The point is that every hospital looks an awful lot alike from the inside at 3 am; your precious moments outside will sustain you through residency, and you will want to be where you want to be. Consider your happiness when you pick your programs.

Okay, you have narrowed things down to the five programs with on-site surfing and espresso bars. But you will also want a program with a personality that matches yours. Some programs are very academic, others less so. Some programs are laid back, others more formal. How can you tell them apart? Check things out before hitting the interview trail! First, there is no use in even applying to a program that is so different from your ideal that you will be miserable for the next 3 or 4 years. And second, it is quite difficult to tell programs apart on the interview day, when they will be on their best behavior to recruit you. Talk to faculty at your school about the programs they attended, and then call current residents at those programs to get a sense of their lifestyle. Two of the attendings at my (J. Broder) medical school were recent graduates of the residency program that I ultimately picked and they helped me squeeze in a last-minute elective here.

And do not underestimate the value of an away elective. If you love the program you visit, that is great, since you know which basket to put your eggs in. If you hate it, that is also great, because you know the program from which to withdraw your application. Since you cannot do dozens of away rotations, choose the site carefully and pick one you think will suit you academically and personally. Then, give it your all. That does not mean proving you are brilliant. You will impress attendings and residents more with good humor and a strong work ethic at 3 am. Show them that you possess these qualities, and they will *beg* you to be a resident at their program.

Ultimately, you will have to click the buttons on the ERAS application to send your application winging through cyberspace to residency programs. Be confident, but be smart. You know how you have done in medical school rotations and on standardized tests. Pick programs that match your performance, plus a couple of dream and safety programs. If you pick reasonably, you will get more interviews than you can possibly attend. And do not feel obligated to accept every interview. You may decline some interviews after reconsidering the programs. Remember, if a program offers you an interview, they are probably saying that you have met all of their academic standards. Now they want to know what you will be like to work with. That means you need to be fresh and enthusiastic at your interview, which is difficult to do if you're visiting 20 programs in 30 days, driving to each, wearing the same suit, answering the same questions, etc. Be picky, and then show them that they will enjoy training

you.

For those of you who are third and fourth year medical students, rapidly approaching the 'Match,' I hope the above words will comfort you. The rest of this book will fill in the details you will need to meet the challenge ahead.

For those first and second year students reading this, let us take yet another step backwards. You may think you are going into EM, but you are wrong. You are headed for the wards, where every month you will change your mind about your future. Approach things with an open mind and a good attitude! Even if you are certain you will never be a surgeon, enter that rotation with the mindset that it is going to be the best six weeks of surgery you will ever do.

On every rotation, smile and pay attention! You will learn more by being helpful and friendly than by being sullen and disinterested. It is guaranteed that the residents will be even more tired and downtrodden than you feel, and they will be grateful to you for any help you offer. Grateful residents will teach you procedures, wake you for interesting cases, and let you sleep through the nonsense. Best of all, you may discover that you like some specialty that you had never before even considered. If not, at least you will understand why people in that field are always grouchy and will cut them some slack in the future. If, at the end of your third year, you realize that you have enjoyed some aspect of every rotation you have done, EM may be for you. But for now, the 'Match' is far away, and you should devote your attention to learning. This book (or a newer edition) will be waiting for you when the time comes.

#### References:

- 1) Binder L, Jouriles N. The 2002 NRMP Match in Emergency Medicine. SAEM Newsletter. March/April 2002; 14(2):18-19. [www.saem.org](http://www.saem.org)
- 2) Isverson, Kenneth V. Getting into a Residency. Fourth Edition. Tucson: Galen Press, Ltd. 1996. Pages 440-453.







## Is Emergency Medicine the Right Choice for Me?

### RESIDENT AUTHOR:

Joel M. Schofer, MD (Naval Medical Center, San Diego)

### FACULTY AUTHOR:

Peter Rosen M.D. FAAEM, FACEP, FACS (University of California San Diego)

### EDITOR:

David Wald, DO, FAAEM, FACOEP (Temple University, Philadelphia)

As you enter medical school, some students already have an intended career path. The majority of students, however, are influenced by their past experiences and encounters. Most students can imagine what a physician should look like and what he or she should be able to do. Throughout medical school, especially as you enter the clinical years, this vision starts to materialize as one chooses a career path. Many students will select a medical specialty that provides them with a satisfying and enjoyable career. All of us should attempt to achieve balance and happiness with other important aspects of our own life. For most students, specialty choice is based on a personal or medical school role model, or as much on emotions as rational thought, with no two people choosing their specialty for exactly the same reasons. Emergency Medicine (EM) is an exciting and dynamic field and can offer many benefits and rewards to those who practice it. Many students will make a wise choice when they select EM. Like all other medical specialties, however, EM has aspects of its practice that may be viewed as undesirable, and there are some students who would be better served selecting another medical specialty. What one person sees as a benefit of EM practice, such as a defined work period, may be seen by another as one of its biggest detractors.

### HOW DO YOU KNOW IF EM IS THE RIGHT CHOICE FOR YOU?

This is a difficult question to answer, as there are as many answers as there are medical students entering the field. EM has certain inherent and unique qualities. EM is a complaint-driven specialty and it is often exciting to manage a wide variety of patient complaints within a single shift. The surrounding community and location of the hospital often dictates the variety of cases. As an Emergency Physician (EP) you are often on the front line, being the first physician to care for a patient, at times with little information regarding the patient's past medical history.

EPs typically work shifts with predetermined hours that range in length from 8 to 24 hours, depending upon the practice environment, and patient volume.

Since emergency departments are open 24 hours a day, 365 days a year, EM physicians will typically work a variety of day, evening, night, holiday and weekend shifts. One general trend present in EM is for younger physicians to work longer shifts to maximize time off, while older physicians often prefer to work shorter shifts. While not unique to EM, young physicians without seniority can expect to work more difficult and night shifts than older physicians (these shifts become progressively harder to work as one ages), and not always by choice or with extra compensation. On average, EPs tend to work fewer clinical hours than other physicians, averaging approximately 31 clinical hours per week, with a vast majority of EPs starting full-time employment contracted for 36-40 hours/week.<sup>1</sup> However, even short amounts of time spent caring for Emergency Department (ED) patients can be extremely stressful and tiring.<sup>2,3</sup> Another unique aspect of EM practice and an often cited benefit is the lack of "on call" responsibility when not working clinically in the ED.

To be an EP, it helps to be able to act quickly, often with a small amount of available data. EPs have the unique responsibility of being the first physician to interact with the patient when they present to the hospital with an acute medical disorder. On a daily basis, and using limited available background information, EPs must deal with the most demanding patients, many of whom are angry, difficult, frustrated, seeking secondary gains, intoxicated or in florid psychosis. Well-trained EPs can learn how to deal with these problems safely, and with competency, sometimes so effectively that these difficult patients end up providing the most genuine forms of satisfaction. The EP must possess the right kind of personality, and it may be difficult for a student to test the qualities that are necessary without several rotations in various kinds of practice environments. Many patients present to an ED because it is the only practical or available access they have to the medical delivery system. When overburdened by patients with non-urgent complaints some physicians may become frustrated. Well-trained EPs can easily adapt to caring for a wide range of urgent and non-urgent complaints, and can many times find great satisfaction with situations that may otherwise be frustrating.

EPs have the unique responsibility of being the first to interact with the patient. More importantly, however, is the opportunity they have to feel immediately useful. Patients typically present to EDs with acute fears and pressing concerns. These are not always of serious disease, but may simply be a request for reassurance before leaving for a trip, or because the patient knows that it will be, or has been, impossible to reach a primary physician. Yet, EPs practice in an environment where the next myocardial infarction, pediatric trauma, pulmonary embolism, etc., may be minutes away. We treat all patients, regardless of sex, race, age, complaint, or their ability to speak the same language, as the

physician who is caring for them. The range of clinical conditions seen in the ED is broad and EPs often enjoy the thrill of not knowing what they will see next. Patients can present with emergencies requiring acute intervention and hospitalization or with conditions that are easily treated and followed up on an outpatient basis. Contrary to what is portrayed on television, it will not always be true that this intervention is life or limb saving, but there are certainly enough such cases in EM to satisfy the most demanding adrenaline junkie. The percentage of patients who present with non-emergent conditions will vary with practice environments and can sometimes be tailored to suit an EP's preferred acuity level.

EM can offer physicians certain freedoms unavailable in most medical specialties. Clinical schedules and the number of shifts one works can often be tailored to personal preferences. Part-time work is available. In addition, an EP can sometimes enjoy practicing in more than one ED in a geographic area or can easily relocate without the burden of having to re-establish a medical practice.

Alternatively there are certain aspects of medical practice normally available to other physicians that can be denied to EPs. EPs sometimes have little control over their practice environment due to their status as an employee of a hospital or physician management group. In some situations this lack of responsibility is desirable to a physician; however, increased control can be obtained through partnership in these groups or increased managerial responsibility in the hospital. In general, EPs have less control over their own practice environment than a solo practitioner or member of a small group might have in other fields of medicine.

Financial compensation is of increasing importance to medical students due to the increasing costs associated with medical education. It is hard to know what the total economic package will be for EPs in the future. The annual compensation of EPs is typically more than for primary care physicians but less than many surgical sub-specialists. Different sources list different income levels for EPs, with a range from \$159,000 to \$185,000 per year reported by one source and a mean salary before taxes of \$197,000 per year reported by another.<sup>2-4</sup> While the annual salaries of EPs are average among physicians in general, their compensation when viewed as an hourly rate is quite high due to the tendency for EPs to work fewer hours than other physicians while earning a comparable annual salary.

One theme that seems to recur in EM is that this specialty is considered to be very stressful and it is felt that there is a high incidence of "burnout." There is a persistent fear that no one can practice EM for a long time. This has not been borne out in studies of EM residency trained graduates, but may well have been true for the non EM-trained physician working in an ED. It has been

the author's (Dr. Rosen's) observation over thirty years in the specialty that properly trained EPs do not "burn out," although they may retire younger. Part of the path to longevity is the development of a professional interest in something in your field besides straight clinical medicine. The physicians who develop research or other academic interests, such as supervision of prehospital care systems, aeromedicine, or medical administration have shown great longevity and satisfaction with the field.

Shifts are often unwelcome when they occur on nights, weekends, or holidays and there is very little continuity of care. EPs are often unfamiliar with the patients they treat. Students in the ED who feel that they never have enough information about their patients, that they cannot know their patients, or that the entire system is designed to frustrate them probably will not enjoy being an EP. Moreover, if you are the type of person who has trouble making quick decisions, if you feel that you do not like to interact with multiple patients simultaneously, or have problems caring for patients who are intoxicated, abuse drugs, or have psychiatric complaints, then EM may not be the career for you.

One of the most enlightening experiences a medical student can pursue when debating whether to choose EM is an elective rotation in EM. An elective rotation in academic EM will expose you to the various aspects of EM that have been discussed and provide access to EM residents and attending physicians. These people are an invaluable resource who may offer a unique perspective regarding the career of an EP.

Students should be cautioned to avoid making a decision that will affect the next 20 or 30 years of their lives based solely on one clinical rotation at one clinical site. The reality is that it is virtually impossible for a student to be exposed to all of the parameters of any medical specialty. The practice is going to vary widely not only with geography or academics versus private practice, but with age, personal physical needs, and life experiences. Realize that the field of EM, and the clinical sites available to students, is varied and no one location or rotation should weigh too strongly in your choice of specialty.

There are many excellent references available that address the issue of specialty choice and can provide a student with concrete information regarding EM and other specialties.<sup>5</sup> The American Academy of Emergency Medicine (AAEM) Residency Section (AAEM/RES) maintains a website for medical students interested in EM, [www.emstudent.org](http://www.emstudent.org). The Emergency Medicine Residency Association (EMRA) publishes *EM in Focus*, a handbook for medical students interested in EM, and has a wealth of information available on the medical student portion of their website, [www.emra.org](http://www.emra.org). The Society for Academic Emergency Medicine (SAEM) also has a useful medical student page on their

website, [www.saem.org](http://www.saem.org), including a catalog of all EM rotations available to medical students and an online virtual advisor program. In addition to AAEM/RES's *Rules of the Road for Medical Students*, Anita D. Taylor's *How to Choose a Medical Specialty* and *Getting Into a Residency* by Kenneth V. Iserson, M.D., are two books that can serve as invaluable guides to the selection of a medical specialty and are readily available in most medical libraries. These two books offer objective tests or inventories you can complete to assess your compatibility with various medical specialties. Joining an EM specialty society or organization can expose you to current problems faced by EPs and often will get you a subscription to an EM journal and a taste of the field's literature. In addition, a personal advisor selected at some time during medical school can often serve as an excellent resource when trying to decide upon a medical specialty.

In conclusion, students considering EM should be willing to take care of a diverse group of patients with an array of presentations and medical conditions. Shift work including evenings, holidays, and weekends and the sometimes fast pace of an ED should be seen as positives rather than negatives. Students interested in part-time work, time-off without patient care responsibilities, varied clinical sites, or ease of geographic relocation may find EM particularly appealing.

When debating specialty choice, students must make an effort to educate themselves as much as possible, ensuring that any decision made is an informed one. It is only by learning about the various medical specialties that students will be able to answer the two questions critical to specialty choice. First, will the practice of a medical specialty provide me with an enjoyable and satisfying career? Second, will this medical specialty allow me to have an enjoyable and fulfilling life outside of medicine? When considering EM, if the answer to these two questions is yes, then EM may be the right choice for you, as it was for one of the authors (Dr. Rosen):

"After thirty years in EM, I still feel great excitement about the field. It has been intensely satisfying, and of course was a chance to be part of something new in medicine. That novelty has not ended. EM is still a very young specialty and will evolve with the energy and creativity of its practitioners. It is still the safety net for the medical delivery system, and the place where anyone in our society can turn for help with an acute problem. The work is diverse, and the need for knowledge broad and exciting. It is very hard to know all that is necessary, and therefore it is also very hard to grow bored. The field will change with the various economic and political pressures, but I cannot envision a specialty that is more necessary to a healthy society. I can

only hope that the students who choose the field today will have as long and satisfying a career choice as I have been lucky enough to have made. While the field is not for every student, for those who do accept the challenges and the responsibilities, there will be an unparalleled opportunity for responsibility, fulfillment, and success."

#### References:

- 1) Moorhead JC, Gallery ME, Mannle T, et al. A study of the workforce in emergency medicine. *Ann Emerg Med.* 1998;31:595-607.
- 2) Taylor AD. How to choose a medical specialty. Philadelphia: Saunders; 1999:65-71.
- 3) Iserson KV. Getting into a residency. Tucson, AZ: Galen Press; 2000:40-2,135.
- 4) MGMA 2000 "Physician Compensation and Production Survey: 2000 report based on 1999 data", sponsored by Cejka & Company, St. Louis, MO.
- 5) Kazzi AA, Langdorf MI, Ghadishah D, Handly N. Motivations for a career in emergency medicine: a profile of the 1996 US applicant pool. *Canadian Journal of Emergency Medicine.* 2001;3:99-104.

# 3 What Do Program Directors Look For in an Applicant?

RESIDENT AUTHORS:  
Luan E. Lawson, MD (East Carolina University)

FACULTY AUTHORS:  
Felix Ankel, MD, FAAEM, FACEP (Regions Hospital, Saint Paul, University of Minnesota)  
A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

Faculty Editor:  
Peter M.C. DeBlieux, MD, FAAEM, FACEP ( Louisiana State University, New Orleans)

Emergency Medicine (EM) continues to be one of the more competitive fields to match into. “What do program directors look for in candidates?” is a common question of the prospective EM applicant. In this chapter we will describe opinions as to what program directors (PDs) look for in candidates.

It is the job of a PD to choose candidates who have the knowledge, skills, and attitudes to become a successful EM resident. When evaluating EM applicants, PDs look for resident potential in *the three ‘Cs’: Competence, Compassion, and Contribution*. It is difficult to predict the intellectual capacity and underlying personality of a candidate. The process of ranking candidates has been compared to committing to marriage with only a personal ad and dinner engagement. Often, the only information that the program director has to base his or her choice of residents on is the application and the interview. PDs look at past performance to predict future success.

## WHAT WE KNOW FROM THE EM LITERATURE

Two articles describe the relative importance of the specific elements in EM applications.<sup>1, 2</sup> Table 1 lists elements of an EM application in descending order of importance from an article by Crane and Ferraro.<sup>1</sup>

1. EM rotation grade
2. Interview
3. Clinical grades
4. Other
5. Recommendations
6. Grades (overall)

7. Elective at PD's institution
8. Boards (overall)
9. USMLE II
10. Interest expressed
11. USMLE I
12. Awards/achievements
13. AOA
14. Medical School attended
15. Extracurricular activities
16. Basic science grades
17. Publications
18. Personal statement

Modified from Crane JT, Ferraro CM. Selection criteria for emergency medicine residency applicants. *Acad Emerg Med.* 2000;7:54-60. Reproduced with permission.

This table provides an average listing of the variables that are considered when evaluating an EM applicant. However, the importance of these variables are likely different for each individual program. One should note that "Other" ranked 4<sup>th</sup> out of 18, indicating that there is more to the selection process than what this table and rank provide. PD considerations such as "applicant's prior training," "reasons for switching programs within the same specialty or seeking additional training within another specialty," "evidence of student and community leadership activity," "life experiences" and "long-standing professional or personal interactions with the PD or faculty" are potential examples of "other." Variables such as "interest expressed" are difficult to define, and could indicate elements such as "research and scholarly activity" or "commitment to EM," which may be one way or another partially reflected in other items that were included in the table. *Rules of the Road* has dedicated several chapters to address many of these variables. The authors and editors hope that they will each guide you through the stressful process of "the Match." The rest of this chapter will describe a select number of these items, which we deemed most important.



### EM PROGRAMS ARE NOT ALL THE SAME

For example, a research-oriented program may consider prior scholarly activity one of the top variables or even a requirement in their evaluation strategy. Another may value applicants with a proven record of team play, integrity and strong work ethic.

The mechanism of application review may differ between programs. In some programs, the review of the candidates' files may be done year after year by the same team of 2-3 experienced faculty members. Those typically include the PD and his or her Associate or Assistant PD. Associate and Assistant PDs are typically proctored and trained by the PD to perform this task with consistency to match the general philosophy and scoring strategy of the program. Often, equivocal files are passed over to another member of the review team for a second opinion. At other programs, the applications are divided up among the entire group of faculty members during a staff meeting or divided among volunteer faculty with variable experience with this process. In such a situation, a wider variability of perspectives, strategies and bias is introduced into the scores applications receive. The PD may only review files with the highest scores, while in others he or she simply reviews and scores all files, irrespective of the results of the review by the first team.

### CLERKSHIP SCORE AND CLINICAL PERFORMANCE

Your performance in an EM rotation is one of the most important parts of the application. This is one area where an applicant's knowledge, skills, and attitudes in EM can be assessed. Make sure you rotate through an emergency department (ED) that has an EM residency and faculty who are known in the field and can perhaps write you letters of recommendation. If you are at a medical school without an EM residency, consider doing a rotation away. When seeking letters of recommendation at away rotations, it is essential to inform the program director or the director of the student rotation at the outset exactly what your goal and interests are. You should consider your EM clerkships to be each a month-long job interview and perform at your highest capacity.

PDs will carefully look at your performance in any EM clerkship you would have taken, at your home institution or as an away elective. PDs will evaluate the score received, the written statements, and the letters of recommendation that they receive from EM faculty you worked with. It is not uncommon for PDs to contact programs to inquire about a candidate's clinical performance during a clerkship, and request a faxed copy of the full clinical evaluation records. PDs will also tend to look more favorably at letters or evaluations that they receive from individuals they know. This is important since such individuals are familiar with the process and very aware of the importance of providing an accurate and complete assessment of an applicant's profile and performance.

It is evident that PDs would all wish to match candidates who are enthusiastic, hard working, and reliable, who possess outstanding clinical and interpersonal skills, an excellent knowledge base and a proven record of commitment to the specialty. Once discovered during an EM clerkship, it is reasonable to assume that such a student would typically be rewarded with "honors," a top score, or an outstanding EM clerkship evaluation. This perhaps explains how this variable is most important to PDs. It is reasonable to assume that EM PDs and clerkship directors would reward an outstanding clinical performance with a top score on the clerkship, and otherwise indicate through an average score that an applicant is not one of the most competitive they have had.

### CLERKSHIP SCORES ARE NOT ALL BORN EQUAL!

This is important to emphasize since the process that determines whether a student will or will not get "honors" is far from universal. Many programs include a shelf exam and its score in the grading process, which then tends to favor excellent test takers and may undervalue the outstanding clinical performance and work ethic of an applicant who does not do well on multiple choice exams. This gets further complicated when we take into consideration that a number of EM clerkship directors, concerned about harming an EM-bound student's chance of matching in EM, may be more likely to grant them "honors" as a score, while others may be diametrically rigid in this process. Note also that some schools no longer use different scores to reflect upon students' performance during a clerkship. This complicates the matter for students and PDs, who now have to rely on evaluation comments, seek to procure them, and letters of recommendation. Skepticism could run high, and some PDs may then seek to see the name of a letter writer whose recommendation they can trust.

### THE INTERVIEW

The importance of your interview at a program cannot be over-emphasized. PDs consistently consider this direct interaction with the candidate to weigh at the top of the variables they consider. The interview allows you to demonstrate your personality and is described in a different chapter of this book. Attitude is important. Show them you are trainable, enthusiastic, pleasant to work with and reliable. Listen, and be kind to all people that you are in contact with. Act interested and ask intelligent, informed questions. Be prepared, and take time to review information about the program, to identify what is special about it and about the interests of its faculty. Do not be a "no-show" at an interview. The world of EM is small and word will get to other programs.

### CLINICAL ROTATIONS

PDs will also carefully look at your performance in other non-EM clerkships, and in particular at the core required rotations such as Medicine and Surgery.

PDs will evaluate the scores received, the written statements, and the comments made in the Dean's letter.

High marks in other clinical rotations such as internal medicine, surgery, and pediatrics are important. When a school does not use grades, this complicates the process, since it forces the PD to rely on other variables that may not favor some of the candidates. Clinically average or sub-average candidates may succeed in securing excellent comments and letters of recommendation, while clinically outstanding ones may not be able to relay effectively enough the quality of their performance.

### LETTERS OF RECOMMENDATION

The best letters of recommendation are from people known in the field of EM. Many PDs look for a standardized letter of recommendation (SLOR), which is available in a template form on the Council of Emergency Medicine Residency Directors (CORD) web site at [www.cordem.org](http://www.cordem.org). Doing an EM rotation without providing a letter of recommendation may be perceived as a red flag. Having more than two letters from the same rotation may be excessive. One or two letters from core clinical rotations may help some, but letters from other fourth year non-EM electives are generally less helpful.

The central role of excellent letters of recommendation cannot be over-emphasized. Ask people you know who respect you and will perform this task of reference in a prompt fashion. Ask faculty who know you personally and who have worked with you. Do not ask your favorite absent-minded professor to write you a letter unless you are willing to be persistent until you confirm the programs to which you apply have received it.

It is of paramount importance to utilize letters from physicians who are known in academic EM, such as the EM residency director or chair at your home program. It will create much speculation if you only present letters from internists or family practitioners. It is acceptable if you have worked closely with a physician from a specialty other than EM for them to write a letter for you especially if they know you well.

Take caution because people who write letters of recommendation on a regular basis speak their own language and what sounds fine to you may indicate that you are mediocre to a residency director. Residency directors look for phrases like "exceptional," "would recommend without reservation," or "wish he or she would remain at our residency program." This can be overlooked by faculty in EM or other specialties that are not familiar with the intricacies of the EM Match and the way we interpret each other's letters. Refer to chapter 5 in this textbook ("Letters of Recommendation") for additional detail on this topic.

## THE DEAN'S LETTER

The Dean's letter may not be important to a number of PDs and has been even harshly criticized in the literature.<sup>3</sup> Some PDs still give considerable weight to this document, while others find it useless or simply use it to screen for "red flags," for class rank and for overall clinical and interpersonal qualities and problems. They search it for "red flags" in the written summaries provided by the dean and the clerkship directors. They review it to get an overall assessment of your performance through four years at one single institution. Some Dean's letters still use a classification that relays to the reader a general indication of a student's rank relative to the rest of the class. Take time when you meet the Dean or Associate Dean who will write your letter to go over the strengths of your application and the specific evidence of your commitment to EM or your compatibility with such a career. If you had tangible difficulties during medical school or legitimate reasons to take substantial time off during the course of your education, discuss them with the Dean and define the optimal way to relay them in the letter. Get the Dean to acknowledge in your letter your commitment to the specialty, which would be an unquestionable evidence of your commitment to EM as your first and only career selection.

## BOARD SCORES, AWARDS AND ALPHA OMEGA ALPHA (AOA) MEMBERSHIP

This is where PDs evaluate your knowledge base. A moderate amount of emphasis is placed on pre-clinical grades during the first two years of medical school. Mediocre grades do not preclude you from matching at an excellent EM residency program; however, you will be expected to compensate with exemplary performance in other areas, such as clinical rotations.

To be reasonably competitive in the EM Match, you should aim to make above 50 percentile on the United States Medical Licensing Exam (USMLE). Some programs have cutoffs and do not interview candidates unless they make a certain score on the boards, unless they specifically choose for one reason or another to make an exception to this rule. Occasionally, a communication from your advisor or one of your faculty members who is known to that program may result in such programs taking a second more favorable look at your application. Note that programs will not openly declare or admit the existence of such a cut-off. Furthermore, the level for such a cut-off, when in existence, varies from one program to another and possibly from year-to-year. Last but not least, note that the presence or absence of a cut-off neither proves nor negates the outstanding quality or competitiveness of an EM training program.

Program directors generally consider USMLE Step II grades more strongly than Step I. If you have a poor test result on Step I, strongly consider meticu-

lous preparation and an early fall test date for Step II. A higher Step II grade may open doors closed by a poor Step I performance. If there are special circumstances why you did poorly on the boards, we suggest you explain this in the personal statement. Some program directors may be hesitant to rank a candidate highly who has done poorly on the boards as these trends tend to persist.

Being AOA or having academic awards is certainly not a necessity; however, it does help set you apart. Note that PDs also realize that recognition through awards or AOA membership is certainly not an absolute guarantee of a rewarding professional relationship or clinical performance.

### MEDICAL SCHOOL ATTENDED

PDs place a small but significant amount of value on the identity of the medical school attended by applicants to their programs. Graduates from the most competitive medical schools such as Ivy League schools may have some weight added to the value of their application in certain programs. Matriculating into such schools is in itself a competitive process, which predicts success, motivation, a strong work ethic and academic potential. PDs may use published reports that rank US medical schools. In addition, PDs tend to use such a marker to highlight the competitiveness of their EM program to their Dean and future classes of applicants. PDs may also grant special consideration to candidates from the medical school to which their own program is affiliated. Last but not least, foreign medical schools typically would receive the least value when PDs assess a file, for many reasons. This includes mainly the unease and lack of familiarity of PDs with foreign schools, their standards and curricula, and the abundance of qualified US medical school graduates applying to EM.

### RESEARCH AND SCHOLARLY PROJECTS

Research experience is becoming more important for residency applicants in EM. It demonstrates an interest in original thought, commitment and follow-through in a project, and contribution to the field of medicine. It is important that you do not misrepresent your amount of participation on a research project. Bibliographic citation guidelines can be downloaded from the Society for Academic Emergency Medicine (SAEM) medical student home page at [www.saem.org](http://www.saem.org). If you do have publications, bring copies with you to the interview.

Crane and Ferraro's study resulted in "publications" ranking among the lowest of the variables that they studied.<sup>1</sup> It ranked lower than the grades earned during the preclinical basic science year of medical school. This is very surprising and perhaps would not be the case had they included "Scholarly Projects" or "Research Involvement" on their list or in that variable. Being a listed author

or co-author on peer-reviewed publications may certainly not be important to PDs. However, this may not apply to involvement in EM research and scholarly activities. Such involvement constitutes one of the most effective ways to demonstrate your commitment to the specialty, to get to know leaders in the field and PDs who will review your file, and to get them to remember you favorably. It demonstrates to them academic and leadership potential and motivation. It showcases your ability to reliably and effectively complete assignments and to collaborate with faculty, residents and other students involved in your project. Refer to chapter 19 in this textbook ("Research and Scholarly Projects") for additional detail on this topic.

### THE PERSONAL STATEMENT

The personal statement is your opportunity to showcase yourself as an individual. It plays a significant role in the PDs' evaluation process. This is elaborately discussed in chapter 6. Let the residency director know why you will be a good physician, what led you to choose EM, and what you feel you can contribute to the residency program. Let others critique your statement, and make sure you have no spelling or grammatical errors.

### EXTRACURRICULAR ACTIVITIES

Extracurricular activities demonstrate that you have interests outside the hospital and provide topics for you to discuss during the interview. Most PDs look for candidates that go beyond just working clinical shifts. However, most will be deterred by "lifestyle letters" that focus on the great fit between the flexibility in scheduling and the hobbies you have. During the presentation of your profile, make sure to balance between extracurricular activities, which relate to your own personal interests and hobbies with some that aim to serve others. Volunteer activities, membership, contributions, or leadership in student and medical organizations are helpful. PDs value leadership skills as a high marker for academic potential, trainability, reliability and outstanding work ethic and interpersonal skills.

### COMMITMENT TO EMERGENCY MEDICINE

Commitment to EM is another central element in the PDs' evaluation. This can be demonstrated by EM-specific research and scholarly activity, previous Emergency Medical Services (EMS) experience, as well as involvement with EM interest groups, societies and professional organizations. Such involvement will not only add strength to your file, it will also alert you to the rewards, controversies and challenges associated with a career in EM. Being well informed can then be readily apparent during your interviews, your clerkship performance, and your personal statement. Start early. Get to know EM; and get EM to know you.

## CONCLUSION

We hope that this chapter has given you a straight-to-the-point overview on what we believe PDs look for in an applicant. Good luck.

## References:

- 1) Crane JT, Ferraro CM. Selection criteria for emergency medicine residency applicants. *Acad Emerg Med.* 2000;7:54-60.
- 2) Wagoner NE, Suriano JR. Program directors' responses to a survey on variables used to select residents in a time of change. *Acad Med.* 1999;74:51-58.
- 3) Edmond M, Robertson M, Hasan N. The dishonest dean's letter: An analysis of 532 dean's letters from 99 US medical schools. *Acad Med.* 1999;74:1033-1035.





# 4

## Selecting Your Medical School Advisor?

### STUDENT AUTHOR:

Barbara L. Keller, JD, MS-IV (Louisiana State University, New Orleans)

### FACULTY AUTHOR:

Howard Blumstein, MD, FAAEM (Wake Forest University)

### FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Louisiana State University, New Orleans)

In the course of making important and lasting decisions in our lives, choosing an advisor is a subtle but critical part of the process. As Cole (1997) remarked, "one person's data is another person's noise, and knowing which is which in any particular instance is not a simple matter."<sup>1</sup> Choosing a specialty, and then selecting a residency program certainly qualifies as an important and lasting decision. You may be blessed - or cursed - to have a faculty member assisting you in these choices.

At some institutions, students are assigned faculty advisors, while at others there is no formalized process, and students are left alone to find and establish a relationship with an advisor. Whether the choice is entirely yours or you are assigned a faculty member, it is incumbent upon you to find individuals who are both able and willing to proffer sound advice regarding emergency medicine (EM) as a career choice and practical pointers on shaping your career. You should strive to find an advisor that keeps the "data to noise ratio" optimal in order to glean information that will actually help *you personally* in your decision-making process.

Factors to consider in selecting an advisor:

- What you want from the relationship
- How much time you need from the advisor
- The advisor's perspective on EM
- The advisor's practical experience

If you are vacillating between specialty choices, you should consider consulting advisors from each specialty to help guide you toward a good fit. Once you have selected a specialty, your choice of advisor should be influenced by the need for accurate information about the specialty, residency requirements and options within that specialty. You should seek residency-trained, board-certified emergency physicians (EPs) in order to obtain first-hand advice about EM training.

Physicians outside the specialty of EM may have an inaccurate or prejudiced

view of the field. One physician who completed residencies in both internal medicine and EM contrasted the perspectives from which he was trained in the specific context of the "ABCs." "As an internal medicine resident, my training focused on recognizing respiratory failure but, beyond oxygenation, I had no training in how to manage an airway."<sup>2</sup> Spend time talking with residents who are currently training in EM as well as with graduates of EM residency programs. These people have done what you are planning to do, and are experienced in approaching patient care from the perspective you are considering adopting.

Be prepared for the possibility that you will receive negative advice regarding your choice of EM from some faculty and other "advisors" at your medical school. One study reported that 57% of students interviewing for an EM residency indicated they had received negative advice from faculty, department heads and even deans.<sup>3</sup> The negative information was primarily criticism of the specialty itself, rather than comments about a particular student's qualifications for a career in EM. Examples cited include the applicant being "too good for emergency medicine" and that EM was a low prestige field. In the same study, only 45% of the respondents were assigned an EP as their advisor. Of those who did receive advising from an EP, 87% of the advisors were board certified in EM. Only 70% had completed an EM residency, and 77% were engaged in EM practice full-time. None of the students' advisors possessed all three attributes.

Determine your advisor's training and experience in order to help you place an appropriate filter on advice given. Be smart enough to recognize inherent bias when given non-factual information. Some apparently negative - or even positive - advice may be a product of such bias. Be aware that some advice may simply be thinly disguised recruiting. Negative advice is not always unsound; your advisor should provide genuine pros and cons concerning the field of EM as well as specific programs.

Factor into the relationship your own personality and needs. Choosing an advisor resembles choosing a physician. Some patients just want the facts and some people need their hand held. Know which type you are and find an advisor with whom you can interact accordingly. Give some thought to what your needs are with respect to time. If you have a lot of questions or uncertainties, you may not be a good fit with a busy department chair or someone with a more brusque approach to your relationship. If you are already certain about your choice of EM and are looking for a mentor to shadow, such a person might be the perfect fit. On a subtler level, it may be helpful to seek out advisors with whom you share certain personal characteristics and background. Gain the perspective of someone who has walked your intended path wearing similar shoes.

Finding an advisor with training in EM and experience as an EM advisor may be a challenge at some schools. If your medical school has a formal system of assigning advisors, find out if there is a mechanism for expressing a preference for specialty. Whether you are assigned an advisor or left to choose one, get to know the program director for the EM residency affiliated with your institution. Find ways to interact with and obtain guidance from practicing, residency-trained, board certified EPs with or without the formal role of advisor to you. Emergency Medicine Interest Groups (EMIGs) are often a good way to identify faculty members who can serve as advisors, and offer excellent opportunities to become involved in activities related to the specialty. The Society for Academic Emergency Medicine (SAEM) recently established a website that provides "Virtual Advisors" to those students in need of well-qualified advisors. SAEM's website (<http://www.saem.org/advisor/index.htm>) should contain the link necessary to access this resource.

Finally, if your medical school does not have a formalized (or even functional) advising program, or if the program in place does not allow for choice or matching of students to advisor based on specialty, consider becoming actively involved to change the process. The benefits to you and your colleagues in subsequent classes will be well worth your effort.

#### References:

- 1) Cole KC. The universe and the teacup: the mathematics of truth and beauty. New York: Harcourt Brace & Company; 1997:40.
- 2) Salen PN. The ABCs of EM training. *Acad Emerg Med.* 1998; 5:81-2.
- 3) Blumstein HA, Cone DC. Medical student career advice related to emergency medicine. *Acad Emerg Med.* 1998; 5:69-72.



## 5

Letters of  
Recommendation

## RESIDENT AUTHOR:

Shahram Lotfipour, MD (Henry Ford Hospital System)

## FACULTY AUTHOR:

Gus M. Garmel, MD, FAAEM, FACEP (Stanford / Kaiser Residency, California)

## FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (University of California, Irvine)

## INTRODUCTION

Many applicants view letters of recommendation (LORs) as a last step to getting into residency. That approach needs to be reconsidered. In this chapter we present salient reasons why LORs should be approached much earlier than the fall of your final year in medical school. Moreover, serious thought should be given to the following points before proceeding with the process. Who and how to ask for an LOR? What should be offered to the authors to make it as easy as possible for them? What should be done to have an excellent LOR written by an author? Emergency Medicine (EM) faculty are encouraged to use the Standard Letter of Recommendation (SLOR), created by the Council of Emergency Medicine Residency Directors (CORD) as a template for letters of reference. According to the CORD task force that created the SLOR, its intention is to assure that important information about an applicant is communicated in a time-efficient manner.

## WHY ARE REFERENCE LETTERS IMPORTANT?

Your application is a reflection of your accomplishments. The LOR comments on your abilities and suggests how well you might do in the future. LORs may elevate an average application and result in interviews you would think impossible based on your grades and board scores. LORs can also prevent the offer of an interview if they describe concerns, regardless of your grades or board scores.

## WHO SHOULD BE YOUR REFERENCE?

Who is the ideal LOR author?

There are many opinions regarding the ideal LOR author, but a person who knows you best and values your abilities is a good choice. It is much better to have a letter from your advisor or someone who has offered to write you a strong one, rather than from someone who does not know you well or has not worked with you closely. If there have been positive interactions, the ideal

LOR authors might include residency program directors, medical student clerkship directors, department chairpersons, and/or mentors. Although not always possible, a SLOR obtained from different attending physicians at two Emergency Departments (EDs) may offer a better perspective of one's performance and capabilities than letters from different faculty at a single ED.

Do I need a letter from the program director/chairperson?

It is always desirable to have LORs authored by respected EM faculty. Whenever possible, these authors should include program directors (PDs) or department chairpersons, since they most likely have evaluated numerous students in the past. Given this circumstance and their recognition throughout the country, their LORs may have more impact. However, their letter may be of little value if they do not know you personally or have not worked with you clinically. If it is possible to get to know these individuals during your rotation, their letter could be a strong addition to your portfolio. Letters from PDs or department chairs are likely to carry added weight if other factors are equal.

EM is unlike some older specialties where the Chair's letter is expected and carries the bulk of the weight of all the LORs. Again, personal knowledge is much more important than the stature of the author.

Should I use research instructors as a reference?

This is a great addition to your application if you have had a productive relationship with a research director and you have done an exemplary job. This letter might have additional importance for residency programs that consider research a strong point for an applicant, or for programs with designated research time. This LOR could be considered one of the core letters for applicants who have done well-executed research or for applicants who have extensive contact with the research director. If this is the case, the research director should be able to discuss personal attributes that might make you successful during your residency training.

Should I use non-EM rotation faculty as LOR authors?

In addition to LORs from EM faculty, narrative LORs from non-EM faculty may be an integral part of your application materials. Faculty supervisors or course directors of the longer core rotations (IM or Surgery) or from senior clerkships with tremendous patient care responsibilities (ICU, CCU, or Sub-internships, for example) are helpful because frequent interactions involving patient care issues and educational sessions occur. These rotations often include on-call activities, which may offer faculty supervisors added information about personal qualities such as work ethic, integrity, interpersonal skills, and consistency. These LORs should be obtained from academic faculty, not fellows or chief residents.

*Remember only EM faculty should use the SLOR.*

### What about pre-clinical instructors?

Most students do not have the opportunity to know their pre-clinical instructors on a personal level. Moreover, residency programs generally place more emphasis on clinical abilities rather than pre-clinical performance. Given the preference that residency applicant review committees place on an applicants' clinical abilities, LORs from pre-clinical authors should not generally make up one of the core letters.

The Dean's letter will provide a summary of your pre-clinical years and clinical rotations. Many medical schools allow students to review their Dean's letters prior to distribution. If this occurs, take time to examine it carefully for accuracy and to make sure that important information is not omitted.

### How many letters of recommendation do I need?

The ideal is to secure three or four LORs. Any more than that might raise suspicion about a candidate unless special circumstances exist, such as the need to address issues such as prior residency training, special awards, scholarships, or time outside of medicine during or following medical school (e.g., time in the military or Peace Corps). Less than 3 LORs may delay the decision to be invited for an interview at a particular program. It may even raise concern about the strength of your profile or about your commitment to the application process to EM.

## WHEN SHOULD I ASK POTENTIAL AUTHORS FOR AN LOR?

Although there is no single best time to ask for a LOR, one option is to ask when you will be well remembered, which can be towards the end of your rotation or project. You can even approach your author at the beginning of the rotation and make them aware that you might be asking them to write you an LOR for a residency position in EM.

You should allow your references plenty of time to complete your LOR. Give them at least one month if possible. Make them aware of deadlines and give them the correct address for submission. Do not let your deadlines affect the quality of your letters. If your rotation is much earlier than when you need the letter, this can be to your advantage. You can have the letter written at that time, which can be later modified when you are ready to submit it with your application.

## WHAT MATERIAL SHOULD I PROVIDE THE AUTHORS?

### Curriculum Vitae (see Chapter 6 for format)

It is essential to provide your references with a well-prepared CV. This should be honestly prepared, well organized and professional in appearance and content. Ask your advisor and peers for advice early on. Give yourself adequate time to incorporate any changes they suggest.

### Publications

If you have published or presented at professional meetings, including medical school sessions, provide your references with a copy of your abstract or paper with your CV. Publications included on your CV should be listed using the format found in medical journals. If a paper has been submitted, include a copy of the submission.

### Create a personal portfolio

For applicants with previous careers or with several publications, a neatly prepared personal portfolio that represents your career could be a creative addition to your application. This could be given to your individual references. It might also be sent to your selected programs or presented at the time of your interview to the program director.

### What is the Standard Letter of Recommendation (SLOR)?

The SLOR was created by the Council of Emergency Medicine Residency Directors (CORD) in 1996 in an attempt to "standardize" applicant evaluations by describing abilities and predicting performance relative to students from the same or other medical schools (see appendix). One added goal of the SLOR was to simplify the process of writing LORs for EM faculty authors. The original SLOR has been revised several times since its introduction, and authors continue to have mixed reactions to it. The SLOR also provides information in areas such as, how well you are known by the reference, your qualification for EM as a career, and a global assessment of how well you might do in the match with respect to the programs match history. Space is provided at the bottom of the SLOR for a narrative LOR. EM faculty members are expected to use the SLOR.

### HOW TO ASK FOR A LETTER OF REFERENCE?

Scheduling an appointment provides you a dedicated time to request a LOR and to discuss some of the programs where you will apply. Your CV and personal portfolio should be provided at that time. An office appointment is a much more appropriate time to ask for a LOR than during clinical duties. Less preferable options include leaving a note in their mailbox, a phone message, or email. A designated time is preferred to an impromptu meeting for this important request.

### THE ROLE OF THE COVER LETTER IN REQUESTING AN LOR

Other than your CV and personal statement, one additional means of providing information to your references is to include a cover letter containing pertinent information. A concise and well-organized cover letter includes your request that specific information be emphasized in your LOR. Your references should be given a CV, a personal statement and a cover letter at the time you request a LOR, or shortly following. Some of your references will show you the



letter before sending it out, but most will not because of confidentiality matters. There is a section at the end of the SLOR that asks if you have waived your right to see the letter, which is preferred. If your references offer you the chance to look at the LOR, review it carefully for accuracy.

## CONCLUSION

Plan early to obtain your LORs, and gather the material for your references before you meet with them. Make sure the information you provide (CV, personal statement, personal portfolio, and cover letter) is accurate and complete. Pay attention to details, check for grammatical and spelling errors, and make certain that all relevant information is provided - including contact information in the event they wish to reach you. This is your final chance to make a good impression for your references and the programs to which you apply. Seek advice from your peers and advisor(s) for appropriate references. It is better to ask someone who knows you well or has offered to write you an outstanding letter.

This chapter is a guide to help students get the best LORs possible, which may provide the best opportunity to receive an offer to interview and subsequently obtain a position in a residency program in EM. A balanced application reflects a balanced individual with a balanced education.

## References:

- 1) Caldronery RD. Letters of recommendation. *J Med Educ.* 1983;58:757-758.
- 2) Garmel GM. Letters of recommendation: what does good really mean? *Acad Emerg Med.* 1997;4:833-834.
- 3) Garmel GM. Putting your best foot forward: preparing your residency application. <http://www.saem.org/inform/garmel.htm>.
- 4) Girzadas DV, Harwood RC, Dearie J, Garrett S. A comparison of standardized and narrative letters of recommendation. *Acad Emerg Med.* 1998;5:1101-1104.
- 5) Harwood RC, Girzadas DV, Carlson A, et al. Characteristics of the emergency medicine standardized letter of recommendation. *Acad Emerg Med.* 2000;7:409-410.
- 6) Iserson KV. Iserson's getting into a residency. 5<sup>th</sup> ed. Tucson, AZ: Galen Press, 2000.
- 7) Keim SM, Rein JA, Chisholm C, et al. A standardized letter of recommendation for residency application. *Acad Emerg Med.* 1999;6:1141-1146.
- 8) Larkin GL, Marco CA. Ethics seminars: beyond authorship requirements - ethical considerations in writing letters of recommendation. *Acad Emerg Med.* 2001;8:70-73.
- 9) Mahadevan S, Garmel GM. The outstanding medical student in emergency medicine. *Acad Emerg Med.* 2001;8:402-403.
- 10) Schaidler JJ, Rydman RJ, Greene CS. Predictive value of letters of recommendation vs. questionnaires for emergency medicine resident performance. *Acad Emerg Med.* 1997;4:801-805.
- 11) To the Editor: Letters of Recommendation. *N Engl J Med.* 1983; 309: 735-737.
- 12) Tsonis G, Harwood RC, Girzadas DV. Standardized Letter of Recommendation for Residency Application. *Acad Emerg Med.* 2000; 7: 963.

# Appendix:

With permission from CORD - The Council of Emergency Medicine Residency Directors [www.cordem.org](http://www.cordem.org)

## 2002-2003 APPLICATION SEASON

### Emergency Medicine Residency Recommendation Form

#### Emergency Medicine Faculty ONLY

Applicant's Name: \_\_\_\_\_ ERAS ID No.: \_\_\_\_\_

Reference Provided By: \_\_\_\_\_

Present Position: \_\_\_\_\_ Email: \_\_\_\_\_

Institution: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

#### A. Background Information

1. How long have you known the applicant: \_\_\_\_\_

2. Nature of contact with applicant: (Check all that apply)

- ☐ Know indirectly through others/evaluations
- ☐ Clinical contact outside the ED
- ☐ Occasional contact (<10 hours) in the ED
- ☐ Extended, direct observation in the ED
- ☐ Advisor
- ☐ Other: \_\_\_\_\_

3. If this candidate rotated in your ED, what grade was given?

- ☐ Honors ☐ High Pass ☐ Pass ☐ Low Pass ☐ Fail

Optional: One Key Comment from ED Faculty Eval: \_\_\_\_\_

4. Indicate what % of students rotating in your Emergency Department (or on your service) received the following grades last year:

Honors: \_\_\_\_\_ %      **Total # students last year:** \_\_\_\_\_

High Pass: \_\_\_\_\_ %

Pass: \_\_\_\_\_ %

Low Pass: \_\_\_\_\_ %

Fail : \_\_\_\_\_ %

100% Total

#### B. Qualifications for EM. Compare the applicant to other EM applicants/peers.

1. Commitment to Emergency Medicine. Has carefully thought out this career choice.

- ☐ Outstanding (top 10%)      ☐ Very Good (middle 1/3)
- ☐ Excellent (top 1/3 )      ☐ Good (lower 1/3)

2. Work ethic, willingness to assume responsibility.

- ☐ Outstanding (top 10%)      ☐ Very Good (middle 1/3)
- ☐ Excellent (top 1/3 )      ☐ Good (lower 1/3)

Applicant's Name: \_\_\_\_\_ ERAS ID No.: \_\_\_\_\_

3. Ability to develop and justify an appropriate differential and a cohesive treatment plan.

- ☐ Outstanding (top 10%)      ☐ Excellent (top 1/3)  
☐ Very Good (middle 1/3)      ☐ Good (lower 1/3)

4a. Personality; ability to interact with others.

- ☐ Superior      ☐ Good      ☐ Quiet      ☐ Poor

4b. Personality; ability to communicate a caring nature to patients

- ☐ Superior      ☐ Excellent      ☐ Adequate      ☐ Poor

5a. How much guidance do you predict this applicant will need during residency?

- ☐ Almost None      ☐ Minimal      ☐ Moderate

5b. Given the necessary guidance, what is your prediction of success for the applicant?

- ☐ Good      ☐ Excellent      ☐ Outstanding

### C. Global Assessment

1. Compared to other EM residency candidates you have recommended, this candidate is ranked as:

Ranking	<u># Recommended as such last year</u>
<input type="checkbox"/> Outstanding (top 10%)	_____
<input type="checkbox"/> Excellent (top 1/3)	_____
<input type="checkbox"/> Very Good (middle 1/3)	_____
<input type="checkbox"/> Good (lower 1/3)	_____

Total # of letters you wrote last year: \_\_\_\_\_

2. How highly would you estimate the candidate will reside on your match list? (*See cover letter*)

- ☐ Guaranteed match      ☐ Very likely to match      ☐ Likely to match  
☐ Possible match      ☐ Unlikely to match

D. Written Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signature: \_\_\_\_\_ Dated: \_\_\_\_\_

☐ STUDENT HAS WAIVED RIGHT TO SEE THIS LETTER



## 6

Writing Your CV and  
Personal Statement

## RESIDENT AUTHOR:

Nicole M. Wakim, BA, MS-IV (Loyola University, Chicago)

## FACULTY AUTHOR:

Jennifer A. Krawczyk Oman, MD, FAAEM, FACEP (University of California, Irvine)

## FACULTY EDITOR:

Pamela L. Dyne, MD, FAAEM, FACEP (UCLA/Olive View-UCLA)

## CURRICULUM VITAE

The Curriculum Vitae, or "CV", is a fancy term for professional resume, and may be the first part of your residency application in which the selection committee gets to know you as a unique individual. Therefore, it is of paramount importance to make a good first impression. The CV is intended to be a quick and easy to read summary of your professional life since the beginning of college. For the purpose of residency application, the core emphasis is on your activities and performance in medical school to the present.

Applications are all submitted through the Electronic Residency Application Program (ERAS) (see chapter 1: "The *Match*: An Overview"), so your CV will be submitted and formatted electronically. This means you will not be able to "personalize" it with changes in font size or type for your actual residency application. The ERAS program does it all for you with the information you provide in other parts of your application. You are not given the opportunity to edit or print the document. We do, however, recommend that you do make an effort to type a separate CV to be given to the writers of your letters of recommendation and to have available at your future interviews, though strictly speaking, this is optional. What follows below are recommendations for content and formatting:

Traditionally, a CV includes the following categories:

- Name and address (current and permanent addresses)
- Education (from present dating back to college)
- Research
- Publications (Boldface your name in the publication)
- Honors/Awards (scholarships, AOA, etc.)
- Work Experience
- Volunteer/Community Service Experience
- Membership in Professional Organizations
- Extracurricular Activities
- Personal Activities

The order of the categories, excluding name/address (first), education (second), and personal activities (last) can be rearranged to emphasize your particular strengths. For example, if your publications are phenomenal or noteworthy, list them first after name/address and education. Concentrate on categories that show you have extra motivation or are unique in some way (EMT, volunteering, etc.).

A tricky part of the CV is to know when to be brief and when to go into detail. In categories (research, honors/awards, extracurricular activities, etc.) where you have had a leading or important role, try to be as descriptive as possible. For example if you are a member of the EM Interest Group (EMIG), do not just list that you are a member. Rather, describe what you contributed to the EMIG, how much time you spent working with the group, and what your responsibilities were at that time. No one will grasp how important or time-consuming your activities have been unless you tell them what you did. Each application only gets minutes of review so do not expect the reader to hunt down any information. The same goes for your ERAS application. If you are the president of your class or received a merit-based scholarship, let the program directors know. This type of information is what will set you apart from the rest of the applicants. Again, the CV is the first impression that you are giving the committee. The bottom line here is to give yourself credit if you worked hard. Toot your own horn, so to speak.

In other areas that do not require explanation, brevity is key (do not indulge in details). Fragmented sentences do the job. You should make your CV as aesthetically pleasing as possible. Here are some quick tips and basic CV guidelines to ease the mind and eyes of the reviewer:

- Limit the CV to one to two pages (include a page header if two pages)
- Print on high quality paper (sturdy, white/neutral paper... no neon) with a laser printer. Keep extra copies handy for letter writers and for your interviews.
- Keep it simple and easy to read: changes in font sizes and use of italics or underlining should be kept to a minimum. Do not use anything that is too flashy.
- Use 1.5-inch margins and 12-14-point font.
- Avoid overstating your credentials, as the residency director can and will find out. Do not lie, but do not sell yourself short.
- Begin writing your CV around April of your third year and distribute it to prospective letter writers so that they may make use of it.
- Spell check and style check. Give the CV to your friends and family to check for errors. Finally, have your advisor review it.

An example of how a typical CV will look is shown in this chapter's appendix.

This is only one style. You may make your own adjustments to the basic outline, as long as the meat of the CV is there and it looks professional. For example, the dates (always listed in order beginning with the most recent dates) can be listed either before the entry or following it, as long as your format is consistent throughout the CV. You may also separate categories with horizontal lines listing the category title (eg. RESEARCH) above or below the line. Here you have the opportunity to use your creativity, but avoid anything weird or unusual.

When you have finished with your CV and have shown it to others, stand back and look at the end product. If the appearance and content impress you, after endless revisions and slaving over details, then you are ready to go. Never submit a CV that you believe needs work or could use a little more time. Go that extra step and make it look excellent. If your CV looks sloppy or unprofessional, you can guarantee that the same will be thought of you.

## PERSONAL STATEMENT

As stated above, the CV should be kept simple and easy to read. The same goes for the personal statement (PS), but here you have a chance to communicate your decision to become an Emergency Medicine (EM) physician. The PS is where the program directors and their resident selection committee really get to know you.

As in the CV, you do not want to write anything too weird or too creative. Here excellent writing skills are more than helpful. For those of you who do not write well, fear not. You may need to have people you trust proofread your rough drafts several times for content. The key is to start early and revise, revise, revise.

Getting started can be the most frustrating and time consuming part of the PS. Many do not have any idea where to begin or what to say in their PS. Just know that you are not alone and that by giving yourself an adequate amount of time, you will end up with a fantastic PS. Here are some tips for getting started.

## ORGANIZING YOUR THOUGHTS

- Start writing your PS in the summer between your 3<sup>rd</sup> and 4<sup>th</sup> year. This gives you plenty of time for revisions and starting over.
- Many recommend taking the time to reflect on what truly made you chose EM over the other specialties in medicine. Focus on what has happened since the beginning of medical school that has narrowed your interest to EM. Was it your surgery rotation with trauma elective, a particular patient, or the fast pace of the emergency department (ED)? Whatever it was, just start thinking.

- Write down everything that comes to mind even if it seems trivial or unimportant at the moment. These simple, but honest reflections can be the foundation of a good PS.
- Come back to these brainstormed ideas a few days later and rework ideas that now seem “cheesy” or a cliché.

## FORMING PARAGRAPHS

Once you have some thoughts down and have an idea of where you want to go with your PS, start forming cohesive paragraphs. You can begin with the first, middle, or last paragraph—it really does not matter where you begin. Just start writing and reworking your sentences until they sound fluid and easy to understand. Be sure to write in an active tone and make things as interesting and exciting as possible. You do not want your reader to fall asleep mid-sentence because your writing lacked enthusiasm. If you are not excited about this, neither will anyone be who is reading your statement.

However, avoid being too fancy or flashy. Always lean towards the more conservative side if you question whether something is appropriate. Do not use too many “I” statements and avoid sounding arrogant or pretentious. It is better to be a little boring than to annoy or shock the person who is reading your PS. You do not want the committee to question your professionalism or mental condition.

## WHAT TO INCLUDE IN YOUR PERSONAL STATEMENT?

Try to hit several main categories in addition to why you are choosing EM. For example, what makes you more prepared today for EM than the first day of medical school or the first day of your third year clerkships? What are your other activities that make you a normal, likable person? Can you and are you willing to handle the future rigor that an EM residency entails? What experiences have prepared you for what is to come?

Let them know a little about how well informed you are about current issues that are affecting the specialty, and why you personally find these interesting to address once you match into a residency program.

Avoid using material from your premedical application that describes why you chose to become a physician. Do not leave the reviewer with the impression that you recycled material from your medical school application.

Additionally, you want the program directors and committee to know that you are a well-rounded individual who has a life outside of medicine. Let them know about issues that motivated you strongly enough to dedicate valuable time to them as a volunteer, researcher, team player, or leader during your medical school years. Describe your interests, hobbies, travels, volunteering, clubs/organizations, etc. Talk about your trips abroad to foreign countries or



anything else that may have enriched you as a person. Spend a few sentences on particular events that may have been overlooked or under emphasized on the CV. This is your opportunity to make yourself look good. Avoid overindulging, and definitely resist the temptation to make up experiences.

The PS is the place to comment on academic or professional mishaps that appear elsewhere on your application. However, it is not appropriate to make excuses for past mistakes or actions. If you feel you have a flaw on your application that absolutely needs explaining, simply acknowledge the experience, state what you have gained from it and move on. Many times, the problem that you believe is obvious on your application only becomes one when you focus on it in the PS. Do not draw attention to items that would normally go unnoticed. These are sensitive issues that may need consultation with your advisor, attendings or dean. Do not hesitate to seek their advice.

### PUTTING IT ALL TOGETHER!

Putting it all together can be difficult. Limit your PS to one page (about 5 or 6 paragraphs). Use a 12-point traditional font. Do not try to cram too much on the page by using microscopic fonts. However, do not make your PS too short! You should be able to get your point across in one page. Therefore, every sentence should be important and have a purpose.

Do not use clichés or overused metaphors. On that same note do not start your PS with some form of *"I knew I wanted to be an Emergency Physician when..."* Rather start by describing the situation that caused you to choose this career path. Focus on specific events that have made you who you are today. Make it interesting and keep it honest. Remember the committee will have your PS close at hand during your interview and may ask you to defend or explain what you have written.

Have your non-medical friends and family read it for fluidity and clarity. Rework it based on their suggestions and then pass it on to your medical buddies. Is the point that you wanted to convey coming across as intended? No? Rework it again, send it back to your friends, and finally off to your trusted dean or advisor. Do not ever use the term "E.R." (Use "ED") and do not forget that the easiest way to ruin all your hard work is by overlooking mistakes in spelling and grammar. Spell check, spell check, and spell check!

Finally, remember that the CV and, even more so, the PS are somewhat equivalent to a first impression. Program directors read a lot of personal statements, so make yours stand out. If it is boring, poorly written or not proofread, it suggests ambivalence towards the whole process. This is something that you want to pour your heart into and give your full attention. If you are careless about this experience, what does that say about you and how you will care for your patients? Would you overlook simple details because you ran out of time,

didn't care, or just did not want to expend the extra effort? The PS is the window into an applicant's personality and work ethic. Take the time to do this right. It can save a borderline application from being thrown into the rejection pile.

Good luck with your CV, PS, and the entire application process.

## Appendix:

### Suggested CV Format

	First, Middle, Last Name	
<b>Permanent Address</b>		<b>School Address</b>
Street Address		Street Address
City, State		City, State
Phone number		Phone number

*\*If your permanent address is different than your school address, you will need to list both\**

### **EDUCATION**

Name of Medical School	Dates Attended
City, State	
Anticipated Graduation Date	
Name of Undergraduate University	D a t e s
Attended	
City, State	
Degree, Major, Minor	

*\*List all universities attended in order beginning with the most recent \**

### **RESEARCH**

<b>Position Title (Research Assistant)</b>	<b>Dates of Research</b>
Name of Institution where research was done	
Name of Principle Investigator	
Brief description of research project and your role in the project	

### **PUBLICATIONS**

Principal Authors of Publication (Your name should be bold faced wherever listed)

Title of Publication (either listed in italics of quotation marks)

Name of Journal, issue, and page numbers

### **HONORS & AWARDS**

Name of Award. Name of Institution	Date Received
------------------------------------	---------------

*\*Begin with most recent awards in medical school, followed by those received in undergrad\**

### **PROFESSIONAL MEMBERSHIPS**

Name of Association, Section	Dates of Membership
------------------------------	---------------------

### **EXTRACURRICULAR**

Name of Committee, Club, Institution, etc.	Dates of Activities
Description of job or role.	

### **PERSONAL**

List activities such as hobbies, sports, past times, foreign languages





## Visits and Interviews

### RESIDENT AUTHOR:

Eric C. Bruno, MD (Medical College of Pennsylvania/Hahnemann University)

### FACULTY AUTHOR:

Micelle J. Haydel, MD, FAAEM (Louisiana State University, New Orleans)

### FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (University of California, Irvine)

## INTRODUCTION

One of a medical student's greatest concerns is deciding where to attend residency training. The transition from medical student to house officer can alone invoke significant fear and apprehension. Add to that the stress of several months of uncertainty that precede "Match day", moving to a new city, making new friends, and starting a new job. It is therefore no surprise that applicants who are participating in the match experience considerable stress. The process is memorable and often strongly impacts the course of their professional and personal lives. The intent of this chapter is to assist in negotiating the path through the application process to Match Day. Success requires preparation and awareness, including a mock interview, research into each program, interview schedules, travel arrangements, as well as the actual interview. The interview is pivotal for some applicants and may seem like just a formality for others. However, it should be taken seriously by all. Texts exist to assist with interviewing skills and are applicable to almost any field, although some are written specifically for residency applicants.<sup>1</sup>

## MOCK INTERVIEW

It is a good idea to conduct a practice interview with your advisor or other available faculty. The interviewer, ideally, is one who knows you and your goals, and is also familiar with the interview process. He/she should be prepared to ask challenging questions and provide constructive criticism at completion of the interview.<sup>1</sup> Most applicants benefit from video or audio recording of the mock interview. Your preparation for all interviews should include researching each program, developing answers to probable questions, selecting questions to ask the interviewer, and choosing appropriate attire. During the mock interview you should practice non-verbal interactions, including the handshake, eye contact and body language.<sup>1</sup> Be prepared to discuss topics such as your childhood, your work and college experience, your activities outside of medicine, and your medical school experience. Questions can be straightforward, such

as, "What are your career goals?" or off-the-wall like, "If you were a piece of fruit, what would you be and why?" Preparation, flexibility and confidence will assist you through the process.

### Sample Challenging Questions

- If you join this residency, what complaints will we have about you?
- What do you like/dislike about our program?
- How do your friends describe you on your worst day?
- If you could instantly acquire any talent, what would it be?
- If you could have lunch with any person, living or dead, who would it be?
- Talk about your favorite person, place, or activity.
- Describe your most difficult/frightening/embarrassing/enlightening situation in medical school.
- Give me an example of a time where you went above and beyond the call of duty.
- What have you done that you are most proud of?
- How would you handle the telephone conversation with a consultant who is refusing to come in to see or admit a patient?
- How would you handle a situation where your senior resident is clearly mismanaging a case and the attending is not around?
- What do you consider to be the most pressing problem in the practice of emergency medicine (EM)?
- Tell me about one or two current issues in EM research, education or practice guidelines that you consider to be the most controversial or dynamic?
- Tell me about the scope and activities of the professional EM organizations that you belong to? How do they differ?
- Where have you been interviewing? (Any competitive ones?)
- When are you interviewing at the program where you completed your EM clerkships? (What if you are not?)

### INAPPROPRIATE INTERVIEW QUESTIONS

Certain legalities apply to the residency interview situation. It is a job interview, and as such, is subject to constraints designed to guard against discrimination in hiring. The following types of questions are inappropriate in a job interview:

1. Questions about your marital or family status
2. Questions about criminal convictions, arrests, or court records
3. Questions about age, disability, religion, national origin or citizenship, or military record

4. Asking whether you have relatives who work for the university
5. Questions about political or sexual orientation
6. Questions about clubs or organizations that may suggest the above affiliations
7. Questions about whether the interviewee plans to have children

However, if an applicant broaches any of these subjects, they become fair game for discussion. For example, if you say that you just got back from taking your child to daycare, then this subject becomes fair game for discussion.

If the interviewer asks a question that you feel or know is "out of bounds," you may say, "I would prefer not to talk about this subject in the context of a job interview."

### SCHEDULING INTERVIEWS

EM is one of the many specialties that use the Electronic Residency Application Service (ERAS) for the compilation, completion, and distribution of the residency application. Medical schools and residency programs cite financial and management reasons for the switch to ERAS, a service that allows applicants to apply to many programs, simply with a few moves of the computer mouse. The process does not require the entire application to be complete prior to scheduling interviews, but completion of the application, including letters of recommendation, Dean's letter, and transcripts as early as possible, expedites interview offers. Ninety percent of residency directors require that at least two letters of recommendation be received prior to offering an interview.<sup>2</sup> One recent study showed that the Dean's letter and medical school transcript were most important when selecting students to be interviewed.<sup>3</sup> EM program directors also highly rank student performance on their EM electives.<sup>2</sup> Interview offers are received via email or letter. Consider scheduling interviews at your home institution first. Typically this is where you are most comfortable, which will allow you to hone your interview skills. Some authorities have traditionally recommended scheduling interviews at more desirable programs later in the season, in order to make a lasting impression using your well-honed interview skills.<sup>1,4</sup> However, the single study that actually looked into the role of the interview date in determining whether it has an impact on applicants' position on the rank list of EM programs found no significant temporal correlation between the two.<sup>5</sup>

Beware, that some applicants become "burned-out" and actually interview better earlier in the season. There is no minimum or maximum number of applications, but you should assess your strengths and weaknesses and apply to only those programs where you are willing to train.<sup>1</sup> It is reasonable to apply to enough programs to lead to 10-15 interviews. This number is a good compromise between increasing your chances of matching in a desirable program, and

conserving time and resources devoted to interviewing. Determining the number of programs where you should apply in order to get 10-15 invitations depends on the competitiveness of the programs you are selecting and the academic strength of your application. An honest appraisal can and should be obtained from a faculty advisor with significant experience in the match process. He or she is the only one who can effectively and safely guide you through this process. If you do not like what you hear, go ahead and seek a second opinion. The critical point is not to find that you are past the application deadlines with an inadequately small number of invitations.

If you are one of the fortunate ones with a strong academic profile who end up receiving too many interviews, give your colleagues and the programs the courtesy of an early notification that you are declining their offer or canceling an interview. In the event of a "*No Show*" or late cancellation to a scheduled interview, some programs directors may notify your dean or the individuals who wrote you a letter of recommendation. The world of EM is small. Do not cancel late! Do not be a "*No Show*" to a scheduled interview!

Once you have scheduled your interview, you will be mailed a description of that program's interview process, a tentative schedule, as well as travel and lodging information. Make sure you visit the residency program's website. You typically will find a wealth of information that will help you demonstrate your interest in their program, an attention to detail, and a thoughtful preparedness for their interview. While reviewing general information about a program, take the time to formulate interview questions and comments that will demonstrate interest in that program. In addition to the history, philosophy, and general curriculum of the program, you should familiarize yourself with important publications of key faculty who may be interviewing you. Do a MEDLINE search of the chair or chief, the residency director, and the assistant or associate program director(s). Know their areas of interest and be able to discuss, or at least feign interest in their research. Note that many programs have begun providing this information on their website. A variety of sources are available with information about training programs, including advisors, the Internet, and current EM residents at the applicant's home institution.<sup>6</sup>

## INTERVIEW

If you will be in town the night before the interview, visit the emergency department (ED). This shows interest and sets you apart from other applicants. It also gives you things to discuss during the interview and may generate more specific questions.

Interview days tend to begin early and end late, but plan to allow extra time to compensate for weather or traffic delays. While visiting a program, you will meet many people. Be nice to all of them. You should write down their names, or



collect business cards. This will facilitate sending thank-you notes later. In addition to the residency director, attending physicians and residents, you will meet others who may have more subtle influence, but are also very important. Residency coordinators are a hybrid of secretary, administrative assistant, caterer, tour guide, and receptionist. They are the ones that you speak to when you call for directions, add a letter of recommendation, or schedule your interview. Assisting them on overwhelming days will make you stand out. At some programs, residency coordinators have unofficial limited veto power for applicants who are professional to the physicians, but rude to the office staff. Remember, you are being observed throughout your visit.

### TRAVEL AND LODGING

Travel can be as simple as taking the subway across town or as complicated as flying coast to coast after working a 12-hour night shift. Travel remains the most expensive part of the interview process. Ten years ago, expenses averaged \$1,725 and required 18 days away from clinical rotations.<sup>7</sup> One would reasonably assume that such travel would be significantly more expensive at this point in time. Driving may be an attractive option if you have a reliable automobile and you have interviews clustered in a geographic region. If planning to drive, consider that the interview season runs from November to February, and in some regions, winter storms will affect travel. If you plan on air travel, arrange ticketing early to capitalize on lower fares and take advantage of discounted flights available through professional organizations such as the American Association of Medical Colleges (AAMC) or American Medical Student Association (AMSA). Ground transportation to and from the airport will also need to be arranged.<sup>1</sup>

### LODGING

Obtaining appropriate accommodations can also be challenging. A few programs provide accommodations for the night prior to the interview. They will let you know about such accommodations when they invite you. Occasionally, programs will list residents in their system who are willing to host applicants for the night prior to the interview. This option provides an inside look at resident life, reveals potential housing locations, and allows unstructured time with a resident to discuss the program. The majority of programs simply provide a list of accommodations close to the interview location, although proximity and safety should always be addressed prior to making a reservation. Other options include friends and family who live in the region or residents at the institution or program who recently graduated from your medical school. Ask them for assistance or guidance. Let them know you plan to visit the area and they may invite you to stay overnight at their home during the visit.

## VACATIONING AND AWAY ELECTIVES

Medical students frequently attempt to arrange vacation or away elective time in concert with the interview schedule. Determine your medical school's policy regarding time off from clinical rotations for interviewing. Many schools have specific policies that mandate "time off" should be granted to applicants for their interviews. Such time, however, may need to be made up during the rest of the clerkship or academic year. Time away during clinical months can be very disruptive; however, this is a unique occasion to experience multiple cities. Seek away electives at times and in cities where you have the chance to interview at more than one program while rotating through. This will save you travel and lodging costs. If possible schedule your interviews during a vacation month or around an away elective to optimize your experience and to better know the city where you may end up living for a minimum of 3 years.

## ATTIRE

The dress code for the interview is professional business attire for both men and women. This is not the time to try to be different; be conservative! Show your individuality through your application and interview responses, not through your attire. Suits should be dark and conservative. Your individuality will shine through in your mannerism, speech, and application. Dr. Iserson provides an extremely detailed account of not only the appropriate dress code, but also many suggestions for the entire interview process.<sup>1</sup> Most applicants bring a professional folder or binder to hold paper and pen for taking notes, driving directions, the interview schedule, and a copy of prepared standard and specific questions. Consider including a copy of your CV, personal statement, and any publications you were involved in. Avoid pharmaceutical company "gift" pens and paraphernalia because some programs have policies concerning their use. Your interview day will include a tour, and depending on the weather, you should be prepared with an umbrella, rain or winter coat, and rain or snowshoes. Wearing dress-shoes in the snow is not professional.

## INTERVIEW FORMAT

The interview day tends to start early. Coffee or bagels may be provided the morning of the interview, but do not rely on this to get you through to lunch, if you regularly have a full breakfast. During the morning introduction period, you will meet the residency coordinator, program director, chairperson, and a few residents. The format for the remainder of the day will be provided, which enables you to arrange the questions that you have prepared for the faculty. Most programs schedule interviews on conference days. This is in part because most residents and faculty are "in house", making them visible to the applicants. Attending conference affords you the opportunity to meet the staff,

and allows you to observe interactions between residents and faculty. Conferences also are a way for you to observe the teaching style of the program.

### TOUR

You will participate in at least one tour; at minimum you will visit the ED. Observation of the physical plant shows you the resources as well as the working environment. In addition to noting adequate ancillary support staff, look for items such as ultrasound machines, computerized x-ray viewers and computers with MEDLINE access. Through your observations during the tour, you may gain an appreciation of the clinical arena, including resident-attending interactions.<sup>7</sup>

### INTERVIEWS

Although intended to be a smoothly running operation, problems do occur. Interviews take longer than intended, applicants or interviewers arrive late, and the weather can alter the schedule considerably. Be understanding of the situation. Your flexibility and poise in such situations may move you even farther up the rank order list. The interview, while the most time-consuming, is one of the most important components in ranking applicants. It can rank higher than United States Medical Licensing Exam (USMLE) scores, clinical scores, class rank, or membership in Alpha Omega Alpha.<sup>2</sup> The interviews can involve either a structured or unstructured format. In the structured format, the interviewer has specific questions to ask, in order to compare your responses to the remaining applicant pool. Questions can be ethical, clinical, and social, and are intended to be thought-provoking. The unstructured format involves a less regimented environment, and typically is based on questions about likes and dislikes, with the interviewer developing a gestalt about an applicant.

The program director and his/her assistant or associate directors typically have reviewed your files. Note that many interviewers may not have reviewed your file and would be unfamiliar with the strong and weak points of your application. Some programs believe this reduces the interviewer's bias during the brief interaction, and provides a more accurate assessment of the applicant's interpersonal skills. Do not be offended therefore if you sense that your interviewer asks you basic questions that you believe should be obvious in your file. Through your discussion, lead them to discuss some of your accomplishments and the strong points of your application. This is perhaps another time where you will find the copies that we suggested earlier to have prepared in a folder very helpful to hand to your interviewers. It will give them an impression that you are attentive to detail, organized and well-prepared.

The mock interview should have helped prepare you for the questions. You will be asked about your commitment to EM, especially if you decided to enter

the match for EM later in the season or if you are an applicant with prior training in another specialty. Be prepared to answer questions regarding any holes in your application. Any situation is fair game, including poor grades, poor USMLE scores, time off, and any disciplinary actions against you. Rehearse your answers prior to interviewing. Do not avoid discussing weak points in your application when you are prompted. If you failed the USMLE once or performed weakly, or if you decided on a change of career and have prior training in another specialty, be prepared to explain that when prompted. Make sure you do not hide such aspects of your application *when prompted* by the interviewer. This can leave them with doubts about your integrity.

While the primary goal of the program is to screen and rank applicants, a close second is selling the program to the desired applicant. Demonstrating an intelligent faculty, clinical education, and a favorable work atmosphere are crucial to enticing applicants to rank a program high. In order to feel comfortable, most programs will provide you with ample opportunities to ask questions and cite concerns. Asking the same questions of the all programs gives you variables that you can compare. Specific questions for specific programs help to individualize each visit. Koscove published a large question bank that is an excellent reference for developing questions specifically for EM applicants.<sup>8</sup> Take notes during the introductory session, interviews and lunch, while your thoughts are fresh. Some applicants use a hand-held tape recorder to convey thoughts to tape after the interview is completed. The tape can be reviewed when compiling the rank order list.

## LUNCH

Do not have high expectations about lunch. While some programs send you to local restaurants, the vast majority provide sandwiches, sodas, and cookies. Take advantage of the lunch to talk with residents. Residents tend to be candid about the program, giving information that is not provided in the pamphlet, website, or interviews. Ask residents about their likes and dislikes, and any advice they can give.

## FAILURE OF THE INTERVIEW

The following is a list of factors which we believe can result in a poor interview experience. Some experienced interviewer may find this list incomplete. However, we believe that it will provide with a brief checklist of factors that you must take into consideration through the process of your interview.

1. Inadequate preparation
  - a. Not knowing the basics about a program
  - b. Arriving late/failing to follow the schedule
  - c. Conflicting travel arrangements

2. Inadequate answers
  - a. Answering questions not asked
  - b. Rambling answers
  - c. Inconsistencies in answers
  - d. Evasiveness in answers
3. Inadequate interpersonal skills
  - a. Skepticism
  - b. Impolite or rude communication style or questions
  - c. Poor eye contact
  - d. Poor handshake
  - e. Appearing disinterested
  - f. Chewing gum
4. Red flags
  - a. Appearing untrustworthy
  - b. Lack of insight
  - c. Appearing depressed or unhappy
  - d. Criticizing other programs or individuals
  - e. Over-confidence
  - f. Lack of confidence

#### AFTER THE INTERVIEW

Although the interview itself lasts one day, the applicant should obtain e-mail addresses of residents or faculty to ask any follow-up questions. Many applicants send thank you notes to the program director. Consider sending one to the other faculty members who interviewed you. Many programs will save them in your files and consider them a sign of professionalism that adds strength to your application on the day they prepare their rank list. Personalize the message in your thank you note by commenting on a matter that the interviewer and you discussed. They will remember you better that way.

Applicants who wish to get the feel of a regular day at the program may revisit or stay longer to observe the ebb and flow of the ED. The second look is not mandatory, but can show your interest in the program and allow you more time to visit with residents and faculty. Arrange that visit through the residency coordinator. Observe discretely, making sure you do not interfere with

the clinical duties or needs of the faculty and residents. This is a fine balance that you should tread carefully. Last but not least, remember that you can e-mail or phone residents or faculty with any questions that occur later as you formulate your rank list.

## CONCLUSION

Interviews and visits certainly play a major role in the application process. Give them your most careful attention. Do not be intrusive, overconfident or aggressive. Be prepared, attentive, organized, professional, and positive. For all applicants, irrespective of their grades, letters, publication or other elements of their application profile, this part of the "Match" can make it or break it!

## References:

- 1) Iserson KV. *Getting into a residency: A guide for medical students*. Tucson, AZ: Galen Press, Ltd.; 2000.
- 2) Wagoner NE, Suriano JR. Program directors' response to a survey on variables used to select residents in a time of change. *Acad Med*. 1999;74:51-8.
- 3) Taylor CA, Weinstein L, Mayhew HA. The process of resident selection: A view for the residency director's desk. *Obstet Gynecol*. 1995;85:299-303.
- 4) Miller LT, Donowitz LG. 1997-1998 Medical student's guide to successful residency matching. Philadelphia: Williams & Wilkins; 1997:62.
- 5) Martin-Lee L, Park H, Overton DT, et al. Does interview date affect match list position in the emergency medicine national residency matching program match? *Acad Emerg Med*. 2000;7:1022-4.
- 6) Perron AD, Throop JC, Brady WJ. Sources of information on emergency medicine residency programs: Where do applicants obtain the most useful data? *Ann Emerg Med*. 2000;36:549.
- 7) Aghababian R, Tandberg D, Iserson K, Martin M, Sklar D. Selection of emergency medicine residents. *Ann Emerg Med*. 1993;22:1753-61.
- 8) Koscove EM. An applicant's evaluation of an emergency medicine internship and residency. *Ann Emerg Med*. 1990;19:774-80.

## 8

# Ranking Programs: Medical Student Strategies

## RESIDENT AUTHOR:

George Ralls, MD (Orlando Regional Medical Center, University of Florida College of Medicine)

## FACULTY AUTHOR:

Steven G. Rothrock, MD, FAAEM, FAAP, FACEP (Orlando Regional Medical Center, University of Florida College of Medicine)

## FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (University of California, Irvine)

## GETTING STARTED: EDUCATE YOURSELF

Aside from the difficult task of choosing a medical specialty, possibly the next most arduous task is selecting a particular training program. Only a lucky few are very clear about where they want to train. For most, this process is time-consuming and stressful. Key requirements include:

- Gathering solid information about prospective programs
- Deciding on any geographic limitations
- Choosing between three and four years of training
- Choosing between community, public hospital, and academic training settings.
- Deciding if you have any subspecialty interests (toxicology, EMS, pediatrics, etc.)

## GET THE FACTS

Most medical students gather program information from multiple sources, including program brochures, internet web sites, and word-of-mouth reports from residents and faculty mentors. Onsite clinical rotations remain the best method to learn about any specific training program. However, it is impossible to rotate through all potential sites. Instead, published and internet-based program information will be most useful to familiarize you with the characteristics and academic focus of the programs. Items such as curriculum, Emergency Department (ED) volumes and acuity levels, qualifications and research interests of the faculty, and faculty to resident ratio are usually clearly described. Brochures and web sites, however, tend to lack subjective information, such as degree of satisfaction of the residents.

Word-of-mouth reports can also lack important aspects needed for a well-informed decision. In general, this information tends to be less accurate and may be outdated, as reputations persist, either for good or bad, long after a

program changes. Also, many of those willing to give their opinions about a program base these commentaries on very brief interactions with a program, its teaching staff, and/or residents. Make efforts to verify items of particular interest or concern to you.

A very important aspect of assessing the strength of a program is its accreditation status. The Residency Review Committee for Emergency Medicine (RRC-EM) visits each program every 2-5 years and conducts a detailed evaluation. It then awards accreditation in the following categories:

- Provisional accreditation (given to all accredited new programs for an initial 1-3 years)
- Full accreditation (given to accredited programs for 2-5 years after the first provisional period)
- Continued full accreditation (given to accredited programs for 2-5 years after initial full accreditation)
- Probation (indicating serious problems with compliance with training guidelines)

In general, the longer the period of accreditation, the more confident was the RRC-EM in the ability of the program to continue to provide education in compliance with training guidelines. Applicants should inquire about the accreditation status, either through noting this in the published or web-based material, or inquiring at the time of interview. The vast majority of Emergency Medicine (EM) training programs are fully accredited in the first three categories above.

Discussing your programs of interest with trusted EM faculty members at your medical school is essential. They are the best informed about important issues related to your chosen field, and have the greatest insight into the features of an excellent program. You may get highly variable opinions from different faculty members regarding the same programs. This is because the faculty members often like and recommend programs similar to the one in which they trained (county vs. university vs. community-based). This indicates that most training programs provide a solid education. It becomes a matter of personal preference to choose a particular training model.

As you progress towards your choices, remember to solicit the input of residents in your top programs. If you can, talk to graduates of programs in which you are interested. Most residents and faculty will welcome questions prior to interview season.

## THE DECISION TREE

Each applicant develops his or her own selection criteria. For many, this decision starts simply with geography. Significant others often affect this process greatly, as well they should. Fortunately, there are excellent accredited



EM programs in almost every geographic setting in the U.S. Once you select a particular area, you can obtain a list of Accreditation Council for Graduate Medical Education (ACGME) accredited programs by visiting their website at [www.acgme.org](http://www.acgme.org), or specifically for EM, from [www.saem.org](http://www.saem.org) under "catalog of emergency medicine residencies."

You may already have an idea as to what you consider to be the top programs in the U.S., but it is important to remember that ranking programs in a best-to-worse method is a highly subjective exercise. More concrete is a program's individual academic strengths, for example, the presence of a Level 1 Trauma Center or a strong Medical Toxicology or Aero-medical department. For those with interests in particular areas of EM (Toxicology, Cardiology, Ultrasound, Pediatrics, etc.), information about a program's level of involvement can usually be obtained from program publications or websites.

Another strategy to assess the academic focus of a program is to do a *Medline* search of the program faculty. Many programs are providing this information on their own website. This will tell you the scope of a faculty member's research and productivity, and can help generate intelligent questions for interview day.

### THREE VERSUS FOUR YEARS OF TRAINING

Another point to consider is the three-year versus four-year duration of training, and whether you would need to do an internship in another hospital. Currently, among allopathic training programs, there are 14 "PGY 1-4" programs, 20 "PGY 2-4" programs (which require a "PGY 1" year to be done prior to EM residency), and 91 "PGY 1-3" programs. If you choose to apply to "PGY 2-4" programs, you must also apply to one-year transitional or categorical (usually medicine or surgery) internships.

For some, this choice of format is obvious, but many are not clear on the benefits and/or challenges of these three formats. Clearly, four-year programs offer the resident a longer period during which to hone skills with faculty input and supervision. Also, the "PGY 4" year in some of these programs represents a year where senior residents may function as junior faculty. If a future teaching position is a consideration some academic/university programs view four-year training as superior. Other academic centers favor fellowship training (beyond EM residency) over a four-year residency alone, and there is some thought that graduates of a "PGY 1-3" program might be more likely to pursue fellowship training. Neacy reported residents in four-year programs have a greater interest in academic careers, than residents in three-year programs.<sup>1</sup>

Four-year programs either incorporate or require a separate one-year internship. This year is usually taken as a transitional year or as a one-year internal medicine or general surgery spot. Although the benefit to this approach is

obvious, given that there is significant cross-over between these fields and EM, some would say the time would be better spent in an EM approved fellowship after residency, or in a combined program (EM/Pediatrics or EM/Internal Medicine: usually five total years of training). One caveat is that combined EM/Pediatrics program graduates can sit for the two individual specialty board examinations, but will not be eligible to sit for Pediatric Emergency subspecialty Boards. Only those who have graduated from an approved Pediatric EM fellowship will be eligible. To further complicate things, some programs do not offer the preliminary year ("PGY 1") at their institution. This will require 1) a likely relocation between the 1<sup>st</sup> and 2<sup>nd</sup> year of training and 2) an additional set of interviews for the preliminary year.

For further detail on the issue of Three versus Four Year EM programs, refer to chapter 10 in this textbook.

### UNIVERSITY HOSPITAL VERSUS PUBLIC HOSPITAL VERSUS COMMUNITY HOSPITAL

In choosing a residency, applicants should consider whether they learn best by "doing" or by "being taught." Each of these learning styles has a preferred training environment.

There are two ends of the spectrum in EM residency training. On one end are the public hospitals, whose residencies provide ample procedural experience, but, as a gross generalization, have weaker faculty supervision and bedside teaching and less emphasis on the traditional academic approach to research and patient care. Conversely, university-based programs hold research activities in high regard and provide ample supervision and bedside teaching, but procedural experience can be lacking, as residents from other specialties perform procedures in the ED.

In a university setting, ED staffing is more likely to be a conglomerate of residents from different fields. This is due to the sheer number of both patients and residents in these settings, as well as the undeniable need to train residents in all fields to identify and treat emergencies. Programs still exist in which EDs are segregated into specialty-specific areas (e.g. pediatric emergency department), where the individual services may be responsible for the major workload. As of April 2000, only 46% of the 124 medical schools in the United States have granted full departmental status to EM, which may contribute to patient care turf battles.<sup>2</sup> From a faculty standpoint, the trend is clearly to assign board certified emergency physicians (EPs) to the attending role, though some areas may still be staffed by non-EPs (surgeons, Ob/Gyn specialists, pediatricians, etc.). This may lead to conflict between specialists regarding patient care, and complicate the training environment.

On a more positive note, university-based medicine remains at the cutting

edge of medical care. No other setting envelops the resident in a more fertile atmosphere of information and inquiry. The focus on research in the university arena may benefit those with a strong interest. Also, the availability of, and interaction with residents from other fields may be of great benefit during difficult medical decision-making. There is also the benefit of potentially more diverse experiences on off-service rotations, as most university programs are housed within tertiary care centers.

University-based programs in large cities often see a unique spectrum of patients: with a greater proportion of multiple trauma, both blunt and penetrating (gunshot wounds, stabbings), under-served patients, and patients with diseases of abuse and neglect (alcoholism, IV drug use, domestic violence, etc.). They are also more commonly burn centers, neonatal referral centers and transplant centers. This can be an extremely ill population that accounts for high acuity, high admission rates, and possibly more opportunities for procedural intervention. The one negative aspect of this patient population is that most EM graduates will not work in this setting after graduation.

Community-based programs have their strengths and weaknesses as well. Many of these programs exist to meet the needs of the facility and community within which they exist. Although a resident is a contracted employee in both the community-based and university-based systems, a careful look at the hospital administration's dedication to teaching programs is an important factor. In community-based hospital systems where resident training is a priority, your role as a physician in training should take precedence over your responsibilities as an employee of the hospital. Your day-to-day activities should be dictated by teaching faculty, and be tailored to meet your academic needs. Finally, research opportunities are typically less available in a community hospital training program. If this is an important factor in your decision process, you should address the availability of research work with the program director.

For medical students who have significant others in medicine and/or plan to participate in the "couples' match", community-based programs tend to have fewer available slots and a more limited choice of different residencies.

Community-based programs can be great places to train in EM. In these programs, competition for patients in the ED is minimal. This is due to the limited number of residencies at these institutions, and the fact that most community EDs are no longer specialty-segregated. Patients are admitted to private attendings, not other residents, so this experience more closely parallels post-graduate EM practice. Patients in community EDs approximate the variety of diseases that the resident will encounter in practice. Patients have common complaints like chest pain, fever, and abdominal pain, with less penetrating

trauma, diseases of abuse/neglect, and the complex diseases usually seen at tertiary centers (post-transplant and oncology). Moreover, residents acquire skills in dealing with consulting and admitting physicians more readily in this setting. They must learn the art of the "sale," as opposed to the simple handoff to the admitting resident team that occurs at many university settings.

Most community hospital-based program directors are dedicated academicians who share the research ideals of their university counterparts. Many programs have a formal university affiliation, and a number have significant or even considerable research activity with ample opportunity to learn the skills of publishing and presenting at academic meetings.<sup>3</sup>

The lines between the university- and community-based programs are becoming more and more indistinct. Clearly, programs that traverse these lines well will invariably be counted among the nation's best.

### MATCHING RESIDENT QUALIFICATIONS TO PROGRAM QUALIFICATIONS

An important consideration in interviewing and applying for programs is the individual applicant's academic background and competitiveness. Clearly, it would be impossible for applicants to interview at all existing EM programs. Therefore, a careful and realistic selection process must take place. When developing one's list of potential interview sites, applicants must consider their own competitiveness and prospects for a successful match at each one of them. This is essential to applicants if they do not wish to find themselves, past application deadlines, with a very limited number of interviews offered to them. Or, with a significant chance of not matching, or matching at a program where they figure out after interviewing that they do not want to be. Assessing one's own competitiveness can be difficult, and may require the honest critique from trusted faculty. Those with above average success in medical school will obviously have a wider array of realistic choices. For those with average academic progress, the rank list should not only reflect one's top rated programs or be limited to the programs located in the most coveted geographical areas, but also programs of interest where a match is less of a gamble. The idea is to avoid the dreadful match-day scramble for those who do not match with programs on their list. This is a surefire way of ending up somewhere where one's training years may turn into a true burden.

However, keep in mind that competitive programs are not only interested in an applicant's "numbers." Avoid the tendency to count on or disregard programs based only on this. Try to evaluate the whole "package" you have to offer: your scholarly, leadership and research activity, established areas of interest, and strong letters of recommendations will play a role in determining whether programs will grant you an interview or give you a fair chance of match-

ing with them. Regardless of academic ranking, when it comes to programs of special interest, be pro-active about the way programs view you. Consider externships at these programs, allowing them to see more than your CV, and allowing you to assess your chances of a successful match.

EM residency slots have become quite competitive. Take this into account when selecting your top programs. Be realistic about your choices, but avoid selling yourself short. Put extra time and effort into programs of high interest where competitiveness is an issue, regardless of your academic ranking. However, most of all, discuss this with a faculty advisor with adequate experience who can guide you in the process of self-evaluation and determining the list of programs where you should apply.

### OTHER CHARACTERISTICS OF PROGRAMS

The age of a training program is an important factor to consider. Programs that have been training EM residents for more than 10-15 years (if they have been doing it well) have much to offer prospective residents. Important battles (authority over trauma resuscitation, airway management and admitting privileges) will likely have been fought and won at many older programs. Well-established faculty may have influence on national and regional committees, and use these connections to launch the careers of their residents. However, the fame and influence of a faculty member is, in general, inversely proportional to the time that faculty spends on the ED floor with the residents. Conversely, new programs may have young, eager faculty with substantial presence in the clinical arena (closer to completing their training), and residency administration may be more responsive to requests for change. Applicants with an adventurous spirit may choose these programs for the challenge, while others may gravitate toward established residencies, whose training methods have been well tested. The number and qualifications of the faculty are an important element. Faculty members with fellowship training, additional subspecialty or specialty certification (e.g. pediatric EM, toxicology, sports medicine, research) or with advanced research training (MPH or PhD) are an added attraction to prospective residents. These experts have the potential to enhance training and keep residents and faculty on the cutting edge. Moreover, residents with interest in these areas will have access to experts to help choose a fellowship program, if and when that time arises.

### WHAT IS OUT THERE?

For the year ending June 30, 2001, the ACGME reports that there were 122 accredited allopathic (MD) programs, with 3,614 filled EM residency positions in the United States and its territories (one program in Puerto Rico). Also, most recently there were 8 EM/IM and 2 EM/Peds combined programs available for applicants in the U.S. ([www.acgme.org](http://www.acgme.org)).<sup>4</sup> One should note, however,

that these numbers have somewhat fluctuate over the years. Since 2001, three additional EM categorical EM and one combined EM/IM programs became approved.<sup>4</sup> In March 2002, a total of 125 EM programs participated in the NRMP, listing 1073 "PGY 1" and 138 "PGY 2" entry positions.<sup>5</sup> As of 2001, there were also 32 approved osteopathic (DO) EM residencies for graduates of osteopathic medical schools. Rubio, et al, recently compiled data on the nation's allopathic EM programs and showed the PGY 1-2-3 format to be most common at 72%, PGY 2-3-4 to account for 18%, and PGY 1-2-3-4 making up 10%.<sup>5</sup> All of these allopathic programs take part in the National Residency Match Program (NRMP), and the Electronic Residency Application System (ERAS). The list of programs is lengthy, so refer to the ACGME website ([www.acgme.org](http://www.acgme.org)) or the Society for Academic Emergency Medicine (SAEM) website ([www.saem.org](http://www.saem.org)) for allopathic programs, or the American Osteopathic College of Emergency Physicians AOCEP website ([www.aocep.org](http://www.aocep.org)) for osteopathic residencies, to browse and get access to contact telephone numbers.

### SUMMING UP

Do not be overwhelmed by this process. With careful planning and research you can make secure decisions about which programs best meet your needs. Decide on the most important factors for you. Remember the important aspects of this decision: geography, programs' reputation, specific areas of focus, university- versus-community-based format, length of training, and combined programs. After you feel you know what type of program suits you best, discuss this with trusted faculty members. Gather objective and subjective information about programs of interest using published material, web sites, and personal advice and input. Develop a list of 15-20 choices to send applications to. This should result in, optimally 10-15 interviews from which to create your rank list. The match process is out of your control, but if your rank list contains programs with your preferred characteristics, you stand to do well in the match. Good luck.

### References:

- 1) Neacy K, Stern SA, Kim HM, Dronen SC. Resident perception of academic skills training and impact on academic career choice. *Acad Emerg Med.* 2000;7:1408-15.
- 2) Derlet RW. Organization of emergency medicine at medical schools: compelling reasons for departmental status. *Acad Emerg Med.* 2000;7:1145-6.
- 3) Henderson SO. Academic productivity in emergency medicine. *J Emerg Med* 2001;21: 71-74.
- 4) Rubio CK, Barber K, Wolford RW. Emergency medicine residencies: A descriptive study of program. *Acad Emerg Med.* 2000;7:1166-7.
- 5) Hoffman GL. Report at the 2002 Society for Academic Emergency Medicine annual meeting. American Board of Emergency Medicine. May 2002;14-16.
- 6) Binder L, Jouriles N. The 2002 NRMP match in Emergency Medicine. *SAEM Newsletter.* 2002;14:18-19.





## Applying to More Than One Specialty?

### RESIDENT AUTHOR:

Cherlin Johnson, MS-IV (University of California, Irvine)

### FACULTY AUTHOR:

Susan Stone, MD, MPH (University of Southern California, Los Angeles)

### FACULTY EDITOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Louisiana State University, New Orleans)

Over the last 2 decades, Emergency Medicine (EM) has become one of the most popular career choices for US medical students. In fact, year after year, EM continues to be recognized as one of the most competitive specialties in the "Match." Medical School graduates matching to first year EM residency positions in the 2001 National Resident Matching Program (NRMP) almost broke the 1,000 mark. According to the American Association of Medical Colleges (AAMC), of the 1,001 EM positions offered in match, 995 were filled for a match rate of 99.4 percent. In addition, 144 of the 147 second-year positions in the specialty were filled. Hundreds of EM applicants go unmatched year after year, finding themselves forced to scramble into another specialty or to find another avenue to spend the following academic year.

Along those lines of thought, it is understandable that many students may be too nervous about their ability to match in their primary choice of a specialty and/or of a geographical location of training. Other candidates enjoy the generalist and/or specialty aspects of several clerkships and clinical exposures. Therefore, it is not unusual for candidates to become indecisive when having to finally make a solid choice. While a majority of US medical students will apply to only one type of residency training, some may find themselves applying to different specialties.

While it is clear that getting into an EM residency is more difficult than ever before, applicants should consider this a lifetime investment and work hard toward achieving that goal. For candidates who are less than competitive, it may be a wise move to have backup plans in the event of not succeeding in matching into an EM program. Faculty mentors and advisors may be a valuable resource to review the decision, along with residents within each of the specialties. However, applicants should not forfeit a strong effort towards having a successful EM match first.

For some students, it seems impossible to choose between two specialties. Students should take the time to visit clinicians in the environment where

they would eventually practice. Attempt to locate existing residents and practitioners who have made similar career choices and discover the deciding factors involved in their decisions. The time invested in this activity is well worth it later. An applicant must try to decide where they would be happiest overall, many years into the future.

### WHY ARE STUDENTS INTERESTED IN EM?

Many medical students are drawn towards EM because it incorporates a great deal from a variety of disciplines without some of the limitations that students may find associated with the individual fields. For example, there may be students who enjoy all of the technical procedures involved in their surgical rotation, but do not feel as though they can commit to a surgical lifestyle. There are many students who find pediatrics stimulating; however, they would like the opportunity to work with people of all ages. Gynecological problems can be fascinating but, once again, some individuals do not want to limit their care to one subset of people. Psychiatry can be a rewarding field but affords very little general medical management opportunities. As a matter of fact, the wide diversity and high acuity in the clinical pathology has been documented in a 1996 report of 393 EM applicants to be respectively the first and second most influential factors in their choice of an EM career.<sup>1</sup>

Therefore, since many of the things students enjoy from these specialties can be found within our field, it is obvious why EM has become such a popular career choice.

### WHY DO SOME STUDENTS CONSIDER APPLYING TO MORE THAN ONE RESIDENCY?

It has become clear that getting into an EM residency is more difficult than ever before. This may be intimidating to many students and, although they may be focused on EM, they might wonder if they are competitive enough to obtain a residency position. Concerns may arise about competing with other applicants from a variety of prestigious schools who may have done a great deal of research, have a prior background in EM, or have a tremendous amount of leadership experience. Some students may ask themselves, "Is it realistic for me to apply to emergency medicine for my residency?" This may lead students to feel as though they need a backup plan. For example, some applicants may feel that it is wise to apply and interview with another specialty that is not as competitive or has a larger number of positions available.

The other issue that an applicant may face is the desire to remain in a specific location. They may be married and/or have children or family in the area, which may make relocation to another area not feasible. The student may think it is necessary to apply to a second specialty that has a program they feel more confident about getting into, in the geographic area where they need to re-



main.

In addition, because EM attracts students who enjoy a variety of clinical experiences, it can be difficult for an applicant to decide between EM and another specialty. In other words, an applicant may consider applying to more than one specialty because of their uncertainty about which field of medicine is most appropriate for them. For instance, a student may be torn between the thrill of being in the operating room and the excitement of the variety of challenges awaiting them in the emergency department (ED). A surgical career has an extremely difficult residency with long hours, which extend well into the surgeon's career. Although EM residency is a difficult residency, it eventually affords EM physicians a career with a more set schedule and one over which they have a greater degree of control. This can be appealing to a variety of people, especially those wishing to have families or be heavily involved in research. The advantages and disadvantages of these two fields may cause a student to feel pulled in both directions. This can lead them to apply to both fields, with the hope that the choice will become clearer as their fourth year progresses. The other possibility is that some applicants may choose to let the match process decide their specialty for them because they are unable to make a decision themselves.

#### WHAT IS THE PROCESS INVOLVED IN APPLYING TO TWO OR MORE SPECIALTIES?

If you choose two or more specialties which are involved in the regular match, occurring March 21<sup>st</sup>, you will need to apply, interview, and rank those programs at the same time. The current application system, Electronic Residency Application Service (ERAS) allows you to create a database with personal statements and letters of recommendation. For each program that you apply to, you can select a specific personal statement and a different set of letters of recommendation. The difficulty is that you will need to write a personal statement for each specialty you are applying to, which can be very time-consuming. In addition, you will need to obtain multiple letters of recommendation, which are applicable to each of the specialties you are interested in. Some advisors feel that it is appropriate to have one letter of recommendation that you can send to any program and then two or three relating to the respective specialty. Expect that many faculty and advisors will refuse to provide you with two different sets of letters to accommodate your intent to apply to two different specialties. Their credibility and professional ethic are on the line, particularly when it involves an application to programs in their own field. The other thing to be aware of is the Dean's Letter often indicates your career choice, so it may be necessary to speak with your medical education office and make them aware that you are applying to more than one specialty. Most schools will still

generate only one Dean's Letter, but it will be more vague in stating the medical career you are pursuing. Experienced EM program directors (PDs) look for this information. It should be noted that this might decrease the overall effectiveness of the letter and, thus, weaken your application in general.

As far as cost is concerned, there is no difference if you are applying to five different programs in three different specialties or fifteen programs in the same specialty. In fact the system is designed to accommodate people applying to a second sub-set of programs because many people have to put in applications for preliminary year programs. In other words, the process involved in applying for this preliminary program is the same as would be used for applying to another specialty. Therefore, it is definitely feasible to apply to multiple specialties with respect to the actual application process. However, it will take significantly more time, strategy and diligence on the students' part in order to keep everything separate and prevent any embarrassing overlaps.

The other possibility is that in addition to EM, students may be interested in a program, which is part of the "*Early Match*." There are several programs such as neurosurgery, neurology, orthopedics, ENT, and urology, which take part in the *early match*. If a student is choosing one of these specialties and EM the process will be similar with respect to submitting letters of recommendation, the Dean's Letter, and a personal statement. The only difference is that students may find it easier to manage because the processes take part at different times. Application materials for the early match are due in late summer, while the actual match deadline is in January. The student would be done with the application materials and would be interviewing for the *early match* programs at the time that he or she would need to start applying to the EM programs. Therefore, since the two match processes use different ERAS programs, there is less likelihood of confusion between letters of recommendation and personal statements. In addition, if a student is unable to match in January, he or she will still be able to continue the process with the intention of matching EM in March. Lastly, it is worth noting that even if applying to an early match and regular match program seems to be a more frequent occurrence, this does not mean it is more readily accepted by program directors.

#### HOW DOES APPLYING TO ANOTHER SPECIALTY AFFECT A STUDENT'S APPLICATION TO AN EM RESIDENCY?

Although it is important to understand why some students choose to apply to multiple specialties and how it is carried out, one of the most important things to take into consideration is how this choice will impact the applicant. After speaking with residency directors in top EM programs throughout California, it became clear that there is a lot of risk involved in trying to apply to more than one specialty, with them seeing an average of only 3-4 applicants per

year attempting to do so. When asked how they felt about a student applying to EM, as well as to another specialty, the sentiment seemed to be unanimous across programs. It is highly discouraged with many directors feeling that it shows a lack of commitment on the applicant's part. Residency directors want people who are committed to EM, not people who see it as a backup to another coveted, competitive specialty such as ophthalmology or orthopedic surgery. EM is a demanding residency and PDs do not want to be worried about residents dropping out after taking time to train them. To paraphrase one PD, the training and practice are simply too difficult to go into knowing that it is a second choice. All of the PDs interviewed said if they found out an applicant was applying to an alternative specialty as well as EM, they would view them in a negative fashion, unless the applicant had a good explanation. For example, some PDs may accept applicants who state upfront that their choice to also apply to an additional specialty is due to the need to remain in a specific geographic location, because of a special situation such as family illness or a spouse's career commitment. In this case, it is very important to emphasize that EM is most definitely the first choice and the alternative specialty represents a back up plan. This will be further supported if the applicant has research in EM and has been active in various societies or activities relating to EM.

It is important to point out that PDs are not privy to information regarding an applicant's choice to apply to multiple specialties. The general consensus is that, unless you have a special situation as described above, students should not disclose plans to apply to more than one specialty. However, even if you do not tell the PD, there can be very obvious clues, such as significant research in an area other than EM, personal statements that do not commit, ambiguous Dean's letters or letters of recommendation, or specialty choice-specific material sent by error to the wrong program. Another thing to consider is that when an applicant applies to more than one program at a single institution, there is a reasonable chance that they may run into someone from one program while interviewing with the other. One PD, for example, reported that when she sees extensive research in another field, she automatically asks her residency coordinator to check if the applicant is applying to the other related specialty program in her institution. In addition, there may be talk between residency directors and it is possible that the applicant's intentions will be exposed. If an applicant is set on applying to multiple specialties, it was suggested that it might be more strategically prudent to apply to only one program per institution.

In general, most programs will approach an applicant if there is any suspicion. If a good explanation is given, it will be accepted. For example, if a student

does all of his or her research in one field, but has a change of heart and decides that EM is a superior career choice, most PDs will be open to the switch. If possible, make sure to address this in the personal statement and emphasize the motivation for and dedication to EM.

The last bit of advice from PDs is to let your passion, not your fears and the competitiveness of the *Match*, decide for you what your future career will be.

#### References:

- 1) Kazzi AA, Langdorf MI, Ghadishah D, Handly N. Motivations for a career in emergency medicine: a profile of the 1996 US applicant pool. *Can J Emerg Med.* 2001;3:99-104.

## 10

Three-Versus Four-Year  
Emergency Medicine  
Training Programs

## RESIDENT AUTHOR:

Paul Alleyne, MD (Temple University, Philadelphia)

## FACULTY AUTHOR:

Richard E. Wolfe, MD, FAAEM, FACEP (Harvard Affiliated Residency at Beth Israel Deaconess)

## FACULTY EDITORS:

Pamela L. Dyne, MD, FAAEM, FACEP (UCLA/Olive View-UCLA) & Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (University of California, Irvine)

The decision about the length of the training program is one of the most heated debates in emergency medicine (EM). This may be the only specialty with lack of uniformity when it comes to the training of its future practitioners. Three different formats (1-2-3, 2-3-4, and 1-2-3-4) may be chosen, each with specific advantages and disadvantages. The 1-2-3 programs provide three years of training after medical school and represent by far the majority of training programs. There are presently two 4-year training formats, i.e., the 2-3-4 and the 1-2-3-4. The 2-3-4 programs require an internship in a field other than EM, usually internal medicine, surgery, or a transitional year. Once this year is completed, you then begin an EM program as a PGY2.

So, why should an EM applicant invest in an extra year of training rather than choose to be board eligible three years after medical school? And why would a department design a longer program than required? There are many answers to these questions. All are controversial, individual, and complex, and little evidence exists to support a clear measurable benefit of one format over another. One thing is sure. This is something most EM faculty members have an opinion about! Most training programs, regardless of the format, have common goals: to meet the needs of emergency patients, ensure a long and rewarding professional life for graduates, and to prepare the graduates for the future challenges to the specialty. One can be assured to receive excellent clinical training in any EM program in the country. However, the key to understanding why a specific training program is the length it is may be apparent in the specific mission statement for that individual program.

From the trainee's perspective, at first glance, the shorter training format might seem better. There is a natural desire, particularly for people with an affinity for EM, to get things done quickly and to reach the independence of specialization as rapidly as possible. Furthermore, the 1-2-3 format is by far

the most common so you are joining the majority. Ninety of the currently 124 EM training programs are 1-2-3. Statistics have shown that there is no significant difference in performance between third and fourth year EM residents on in-service exams. This fact is also true in regard to passing the specialty boards. This means that the core content of EM can be learned and mastered in three years. However, possessing the clinical acumen to apply that knowledge is a completely unrelated and probably more important matter.

The 1-2-3 model has clear financial advantages for trainees. Most residents have that friend from college who decided to go to law school, get an MBA, or just start a regular old job. During the time they were in medical school, that same friend paid all his or her college loans, started a retirement account, and bought a new car or home. Unlike other more lucrative jobs, physicians sacrifice early income for the professional rewards of medicine, and secondarily, for the associated prestige and job security. The debt load and restricted lifestyle during residency may be harsh when making comparisons to other fields. This is exacerbated by the fact that the debt load of applicants to EM is higher than for most other medical specialties.<sup>1-3</sup> Rising financial pressures from prolonged training can add to the stress felt by both residents and their families. The fourth year is often described as "the \$100,000 mistake," a statement usually made by those who have chosen the three-year format. Curiously, one rarely hears this expression from graduates of four-year programs. The traditional argument is that when one chooses to spend a fourth year doing a residency, it effectively means that he or she is making \$100,000 less during the span of a career. Not only are graduates of four-year programs missing out on the income benefit of being finished in three years, but there also may be another year of interest on loans. The other side of that is whether physicians who complete a four-year program end up being more highly compensated over the long term or have longer careers than those graduating from a three-year program. The American Board of Emergency Medicine (ABEM) is conducting a long-term study of emergency physicians (EPs) in part to try and resolve this question, but the answers are still unknown at this time.

Beyond income and debt, there may be professional risks with shorter training. When applying for a job, a four-year graduate may be at an advantage. Some believe that those who have completed a fourth year of training are more confident in making decisions and dispositions than their three-year counterparts. A counter-argument proposed is that one year spent as an attending essentially negates this "confidence gap." However, equating a year in training to a year in practice is a slippery slope that questions the validity of graduate medical education altogether. Advocates of the four-year training model believe this confidence gap may never be breached. The practice pattern of de-

ferring to consultants and not knowing when to stand one's ground is much more difficult to learn once away from the protective environment of residency training and the oversight of mentors. Additionally, a graduate from a three-year training program will rarely be a candidate for an academic position at a four-year institution. This argument is valid because it would be inappropriate to be in a supervisory capacity over someone that is technically your same postgraduate year level. However, this does not prevent a three-year graduate from holding an academic appointment at a three-year institution. It simply means that the choice of academic centers is more restricted when graduating from a 1-2-3 model. Additionally, many submit that one must do a fellowship in order to obtain an academic job anyway. So for those academics-bound applicants, it would be most efficient to do a 3-year program plus the fellowship rather than a 4-year program. This definitely makes sense if an applicant has a specific type of clinical fellowship in mind, such as Pediatric EM or Toxicology. However, for those whom this is not the case, the right 4-year program may be all that a motivated and productive resident needs in order to go directly into an academic job.

One sacrifice of the three-year model is potentially less elective time. Electives chosen by EM residents are quite diverse ranging from research, ultrasound training, hyperbaric medicine, or international experiences. The constraints of a three-year program limit these optional experiences. Another point to consider is that in addition to not having additional months to "round out" your medical training, you are also going to have to cover the core content over a shorter amount of time. This makes some three-year residents feel like they are standing in front of a fire hydrant trying to take a sip. This pace of learning is not for everyone and can result in stress, frustration, and depression. Because there is a finite time to learn "everything," it has been argued that you will have an opportunity to manage cases and perform procedures as an intern in a 1-2-3 program that in longer programs only the senior residents get the opportunity to manage. However, the number of cases, procedures, and supervisory experiences is finite and based on the volume and acuity of the patient base. Longer time spent in the emergency department (ED) and longer time at the supervisory level are more easily achieved in 1-2-3-4 programs. There is also greater confidence in assigning more advanced tasks to a "first-year resident" who starts with a year of internship training already completed, as in the 2-3-4 model. How different programs assign these types of clinical experiences varies tremendously, however, and probably has more to do with the individual programs themselves than their format.

The 2-3-4 model is common among four-year programs. They currently represent 20 of the 125 EM programs in the US. They are probably the easiest



programs for applicants with prior postgraduate training, as the first year has less the feel of repeating the internship. Most of these programs will accept the previously completed internship and begin the resident at the PGY-2 level. Similar to three-year programs, one has three years to learn the EM core content under consistent supervision and mentorship by EM specialists. Many applicants in the fourth year of medical school may be concerned about spending a year in a non-EM internship. Many of these internships do not contain very much EM exposure. Some argue that during this non-EM internship year, one can become molded into thinking like a non-EM physician, and that will need to be altered in order to develop into an efficient EM physician. Many applicants prefer to begin their training in a curriculum designed for EM rather than first build off-service skills under the tutelage of non-emergency physicians. However, one should investigate the nature of the EM-1 year in specific 1-2-3 programs. In many of these programs the first year is nearly identical to a transitional internship. Hence, one should be specific about individual programs rather than generalize across programs by format. Additionally, many consider that what a trainee learns nearly universally during the first post-graduate year in any residency of any type are "intern-level" skills. These essential skills are thought to be the foundation for all further training, with a firm foundation in Internal Medicine being the intellectual basis for EM. This is something to keep in mind when considering the type of clinician you aspire to be one day.

Another drawback of the 2-3-4 model is the need to switch home bases after internship for many of these programs, occasionally involving a long-distance move. This actually may be a real bonus for an individual with specific needs, such as due to a relationship or a desire to see another part of the country for a year. Several 2-3-4 programs actually specify where their residents will do their first year, so while the first year is separate from the EM program, there is no choice involved for the applicant.

This is as compared to the other four-year format, 1-2-3-4. There are currently 14 programs of this type in the US. In this format, the pace of the training is similar to the 2-3-4 programs, but the first year is part of the program, so the actual EM residency is four years long. The obvious advantage here is that one only has to interview and match once for a particular program, as opposed to the 2-3-4 format where there is more effort and potential stress involved for the applicant. This model allows for more ED time both at the primary and supervisory level, added off-service rotations, and typically more elective time.

The 2-3-4 and 1-2-3-4 programs are both referred to as "four-year" programs. This does not necessarily mean that the pace of progression in these programs is necessarily slower than that of the three-year programs, but there



is more time to correct holes in the education. There typically is more elective time in four-year programs, though this varies also. For residents with academic aspirations, there is more time to initiate and complete research projects. Although one would anticipate greater authority and independence of the fourth year resident as compared to the third year resident in a three-year program, this seems to be more program-specific than simply an issue of length of training. Allowing the senior resident to manage the ED as a supervisory physician has become increasingly difficult due to the enforcement of the Centers for Medicare and Medicaid Services (CMS) [formerly known as the Health Care Financing Administration (HCFA)] regulations requiring attending contact on all patients in order to bill Medicare for their care. This means that attendings will have a direct interest in assuming a supervisory role with all housestaff, thereby relegating the senior resident to a direct patient care role. However, when a supervisory role is possible for senior residents, the additional year of training is still beneficial in terms of perfecting the skills needed to maintain rapid patient flow and in directing housestaff and ancillary personnel. Some suggest that the four-year model allows the time to better prepare the resident for an academic career as research and administrative skills can be developed as well as the core clinical skills. A recently completed survey of program directors, currently under peer review, found an association between residency format and pursuit of an academic career, though the associated effect size was modest.<sup>4</sup> It found that, for graduates of EM residency from 1995-2000, more 4-year format graduates pursued academics initially (1-4: 34.6%, 2-4: 25.8% and 1-3: 19.4%). Furthermore, more graduates of 1-4 programs pursued EM fellowship training (10.1%) vs. both 2-4 (4.8%) and 1-3 (4.3%) programs. When one looks at choosing founding programs that have lead to the development of new residencies and academic departments, four-year programs do seem to stand out.

Program directors, ABEM, and the Residency Review Committee (RRC) have their own perspective. These groups are duty bound to ensure that the training needs are met and that all graduates acquire the knowledge and skills of the field. The first Board in EM unanimously felt that three years of training were needed, i.e., that the skills, knowledge, and confidence required were at least as great as those in internal medicine and that it was unrealistic to expect surgery to allow residents at the PGY2 level to direct trauma resuscitations. Since many programs at that time only accepted applicants after a general rotating internship, two models (1-2-3 and 2-3-4) were adopted. A number of the 2-3-4 programs saw obvious advantages if they could incorporate the internship year into the 2-3-4 model, and this led to the development of the 1-2-3-4 format (the least common format as it is the most difficult to achieve

because of economic and political constraints). The first board in EM was concerned that, if four years of training were mandated, many young programs would close as their institutions would not support adding the needed positions. Both ABEM and the RRC would prefer a unified model of training, as it would simplify problems that arise from advanced placement and transfers. So for example and just to clarify terminology, all residents in their first year of EM training, regardless of the format of the program, are referred to as "EM-1." The second and third years are called "EM-2" and "EM-3." Hence, for the purpose of transferring between EM programs, PGY2 residents in 2-3-4 programs are considered equivalent to PGY1 residents in 1-2-3 programs, as they are all called EM-1. Note however that this statement is incorrect from an ABEM standpoint. ABEM classifies interns in 1-2-3-4 programs as EM0, PGY2s in 2-3-4 programs are classified as EM1 and interns in 1-2-3 programs are classified as EM1. The potential for confusion creates ongoing problems for the ABEM, the RRC for EM, and programs trying to sort out advanced placement for residents with prior training and transfers.

However, when confronted by the complexity and passion of the debate, the general tendency has been to leave well enough alone and let the choice of the applicants drive the process.

The reputation of a program and its director are often defined by the skills of the weakest graduates. From the perspective of a program director, the four-year model has substantial advantages in ensuring the preparation of their graduates. The added training allows time to identify struggling residents and to intervene to ensure competency. However, the reduced funding in the fourth year from the government (only 50% of the funds provided for direct medical education by Medicare are provided) places pressure on the residency positions controlled by the ED, particularly when other residencies within the hospital wish to expand. The institutional cap on the number of resident positions places four-year programs at risk to have their positions cannibalized for other specialties or to transform into a 1-2-3 format. The RRC is more demanding with 1-2-3-4 models and will demand the justifications for the use of the longer format. Finally, it generally is easier to achieve higher numbers of applicants during the match and to compete with other programs with a 1-2-3 model. The 2-3-4 programs typically receive the fewest numbers of applications. In view of this, program directors who are committed to four years of training are drawn to this position by their educational mission rather than by competitive or financial advantages. However, there continue to be plenty of outstanding applicants who share that mission for their training and career, and upon graduation, these physicians enjoy and potentiate the continued strong reputations of many of these programs.

Evidence-driven answers to the question of length of training may well be provided in the near future by studies such as the ABEM longitudinal study. Unlike other specialties, we may actually end up with data that allows us to assess the importance of length of training. Furthermore, the market, as defined by Medicare reimbursement and the choices of applicants, which has lead to a predominance of the 1-2-3 model already could conceivably develop enough of a critical mass to force the issue and standardize training. However, many leaders of the field, committed to the four years of training, are afraid that the three-year model will weaken us and impair our ability to fully achieve our seat at the table of medical specialties. Time and the market will ultimately provide the final solution to this hotly and perennially contested debate.

#### References:

- 1) Park, R. AAMC Data Report: Graduating medical students' debt and specialty choices. *Acad Med.* 1990;65:485-486.
- 2) Kassebaum DG, Szenas PL. Relationship between indebtedness and the specialty choices of graduating medical students' 1993 update. *Acad Med.* 1993;68:934-937.
- 3) Kazzi A. Resident Loans and Indebtedness. Invited Presentation to the CORD General Assembly. The Council of Emergency Medicine Residency Directors, Chicago, October 14<sup>th</sup>, 2001.
- 4) Lubavin B, Langdorf MI, Blasko B. (Personal communication) The effect of EM residency format on pursuit of fellowship training and an academic career. Submitted to *Acad Emerg Med*, January 2002.



## 11

# Combined Residency Training Programs in Emergency Medicine

## RESIDENT AUTHOR:

Joseph P. Martinez, MD (University of Maryland)

## FACULTY AUTHOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

## O FACULTY EDITOR:

Pamela L. Dyne, MD, FAAEM, FACEP (UCLA/Olive View-UCLA)

## A HISTORY OF COMBINED PROGRAMS

With the closure of the practice ("grandfather") track to Emergency Medicine (EM) Board Certification in 1988, residency training in an accredited EM program became required for eligibility to sit for the American Board of Emergency Medicine (ABEM) or American Osteopathic Board of Emergency Medicine (AOBEM). Prior to 1989, many Emergency Physicians (EPs) who "grandfathered" into EM Board Certification had their initial residency training in a different medical discipline, resulting in a large percentage of the EM workforce being double-boarded by ABEM and AOBEM, as well as another specialty. Since 1989, in order to secure a "double board" in EM and another primary specialty, EPs had to complete residency training in both specialties. They were therefore expected to spend the compounded number of years in training initially required for each of the two specialties. Trainees were then forced to repeat rotations or internships that were required by the Accreditation Council for Graduate Medical Education (ACGME) and American Board of Medical Specialties (ABMS) for both specialties. Recognizing this was unfair to these trainees, the American Board of Emergency Medicine (ABEM) and the American Board of Pediatrics (ABP) revised their training requirements in 1989 to allow recognition of training common to both fields. This allowed for the establishment of a combined EM/Pediatrics residency track with a five-year total training requirement that leads to board certification by ABMS in EM and Pediatrics. During the same year and for the same reasons, ABEM and the American Board of Internal Medicine (ABIM) established a combined EM/Internal Medicine (IM) residency track for board certification in both specialties.

In 2001, there were eight EM/IM programs accredited with a total of 17 residency positions per year (Table 1). In addition, two EM/Pediatrics pro-

grams were accepting applications for a total of four residency positions (Table 2).

**Table 1: Combined EM/IM Programs (Number of 1<sup>st</sup> Year Positions Available)**

Albert Einstein College of Medicine at Long Island Jewish Medical Center Program (2)
Allegheny General Hospital Program (2)
Christiana Care Health Services Program (3)
Henry Ford Hospital Program (2)
Louisiana State University Program (2)
UCLA Medical Center Program (2)
University of Illinois College of Medicine at Chicago Program (2)
University of Maryland Program (2)

**Table 2: Combined EM/Pediatrics Programs (Number of 1<sup>st</sup> Year Positions Available)**

Indiana University School of Medicine / Methodist Hospital Program (2)
University of Maryland Program (2)

Several new programs are currently in development with at least one accepting applications for next year (SUNY Health Science Center at Brooklyn, accepting applications for 6 residency positions). To identify future changes in number of training programs and characteristics of each, look for updated information on the FRIEDA (Fellowship & Residency Electronic Interactive Database) online website. It provides frequently updated, very specific data on each program, as well as links to the program itself for more information. It is run through the American Medical Association (AMA) and the address is [www.ama-assn.org/ama/pub/category/2997.html](http://www.ama-assn.org/ama/pub/category/2997.html).

Despite the limited number of positions and the relative youth of the programs, interest in combined EM programs has never been stronger, as evidenced by the nearly 1,000 applications (not applicants) nationwide last year for these 21 residency positions. A recent survey of program directors reveals that there is a tendency for combined programs to receive an increased num-

ber of applications from International Medical Graduates (IMGs) when compared to the corresponding categorical program.<sup>1</sup> Such a trend was not identified with regard to the number of candidates with prior training applying to combined programs.<sup>1</sup>

Obviously, many applicants are applying to more than one program resulting in multiple applications per applicant. Here are the actual numbers from last year:

**Table 3:**

Program	No. of Applications Received	No. of Interviews Granted
Albert Einstein (EM/IM)	236	30
Allegheny (EM/IM)	99	25
Christiana (EM/IM)	200	30
Henry Ford (EM/IM)	150	30
LSU (EM/IM)	38	15
UCLA (EM/IM)	40	10
Illinois (EM/IM)	no data reported	no data reported
Maryland (EM/IM)	175	25
Indiana [EM/Peds]	46	16
Maryland [EM/Peds]	25	17

☐ Total applications received = 1,009

☐ Total interviews granted = 168

### SHOULD YOU CONSIDER APPLYING TO A COMBINED EM PROGRAM?

Medical students considering applying to “combined programs” should have passion for both disciplines and a genuine interest in using both disciplines in their future practice. During their medical school clerkships they may find that the strengths of one discipline will offset what they perceive to be a weakness in the other discipline. For instance, many medical students enjoy the excitement of EM and the consistent diversity in disease presentation. However, they may miss the continuity of care that is a major component of IM and pediatrics. Likewise, they may enjoy the often time-consuming, yet intellectually stimulating search for the difficult diagnosis encountered in IM

and pediatrics. However, they may also enjoy rapidly stabilizing critically ill patients and moving to the next case as we do in the emergency department (ED).

Unfortunately, many medical students apply to combined programs for reasons that may not be well thought-out. For example, students sometimes choose a combined residency for the prestige of being double-boarded or because they believe that the combined training will make them better physicians. Students should remember, however, that a good categorical residency program provides sufficient opportunity to become a truly outstanding physician. Sometimes students choose a combined program because they believe they will be more "marketable" when applying for academic jobs after residency. Graduates of combined programs are indeed marketable; however, if the student is primarily interested in practicing in only one of the disciplines after completion of residency, that student might be better served and "more marketable" to most academic programs by spending three or four years of training in an academically-oriented categorical program. One can always do a fellowship to allow for further definition of an area of expertise.

Yet the worst reason to choose a combined program is because the student has difficulty deciding between the two disciplines. Unfortunately, many of these students then realize during the first or second year of residency that they truly prefer one field over the other. Continuing on in the five-year program then can lead to significant discontent especially at the midpoint when colleagues in the categorical programs complete their residencies and begin jobs. A five-year residency is a considerable investment of time. Note that this is not as much of an issue for programs where the categorical EM training is 4 years in length. Students considering combined programs should give serious thought as to what their future goals are, and firmly establish whether completing a combined program will really help them accomplish those goals.

There have been a significant number of residents that have started combined programs and dropped out for one reason or another (nearly 20% in one survey).<sup>1</sup> This highlights the need for medical students to thoroughly assess their reasons for wanting to enroll in a combined program. Readers should note, however, that personal communications, which we had with the Program Directors, indicate that most of these situations had occurred early in the maturation of combined programs with significant subsequent decreases in the attrition rate.

## WHAT TO LOOK FOR IN A PROGRAM

Once the decision to apply to a combined program has been made, the next step is deciding which programs to apply to. There are currently eight EM/IM programs from which to choose. Five of them are based in universities, while



the other three are in community hospitals. Both EM/Pediatrics programs are based in university hospitals. Location is an obvious factor, as some applicants may be limited to certain geographic areas. An attempt should be made to spend some time at all the programs that are under serious consideration. This serves two purposes. It allows you to personally observe the interaction of the combined residents with the categorical residents and to get an overall sense of the strengths of the two departments at each particular institution. It also allows the program to get to know you better and allows the program to "put a face with the application." This is especially important given the degree of competition for the limited number of positions. While it is impossible to perform visiting clerkships at all programs of interest, site visits and "second-look" visits are highly recommended.

When meeting with the residency director or co-directors, you should ascertain how many residents have graduated from the combined program and what types of careers they have pursued after graduation. If you are interested in a career in academics, it would be prudent to ask about resident research and teaching opportunities, and success in placing program graduates directly into academic jobs. If you plan to remain in academic medicine after graduation, applying primarily to university hospital-based programs is preferable. It is also wise to assure ahead of time that funding has been guaranteed for the duration of the residency training. Some previously established combined programs have been forced to close due to lack of funding beyond the third year of residency.

The current group of combined-training residents at each institution is the most valuable source of information regarding the program. Many programs have a listing of their residents on their Website, including their e-mail addresses. Applicants should feel free to contact them with any questions. While visiting the programs, spend as much time as possible with the residents. From this experience, try to gain an understanding of how they work within the two departments. Are they fully entrenched in each? Are they regarded as outsiders? Interactions with other departments (surgery, radiology, family medicine, etc.) should ideally be collegial rather than adversarial. This collegiality promotes an atmosphere that is conducive to both resident learning and patient care.

It is valuable to ask each resident what his or her plans are after graduation, and inquire as to how well prepared they feel they are to meet their goals. If possible, arrange to attend daily conferences with the residents. Observe their interactions with their colleagues. By the time they are upper level residents, they should be teaching the younger residents and actively leading discussions.

While visiting the program, imagine yourself there for five years. Evaluate the facilities, the people, and the surrounding environment to see if you will be a "good fit" within the academic community. Inquire as to the common places to live and safety around the immediate campus. If possible, bring your spouse and children to the area as you narrow your choice, remembering that your decision will also affect them. If you do have children, it would be advisable to find out about local school systems.

After mentally ranking the programs, insure that you have a secondary plan in case the Match does not accommodate your choice. Most applicants to the combined programs also apply to categorical programs in one or both of the disciplines. This is sensible and encouraged because as stated earlier, applications each year greatly outnumber the limited number of positions available. The most judicious plan is to rank the combined programs that you are most interested in high on your list and then rank your top categorical programs. Do not rank combined programs that you would be unhappy with merely because they are combined. In the end it would be better to match in a categorical program where you would be happy than in a combined program where you are uncomfortable.

## RESIDENCY

The life of a combined resident is certainly different than that of categorical residents. Although combined residents fulfill all the requirements of both disciplines, the order of rotations is often quite different. Most programs rotate between disciplines in three to six month blocks with some alteration to ensure seasonal variation. It is sometimes difficult to transition from one discipline to the other after a long absence, as the two separate disciplines require slightly different mindsets. However, the combined resident is in a unique position to fully experience all aspects of IM or pediatrics, as well as EM, and truly becomes proficient in both. Because of the EM training, he or she will gain experience in a wide range of invasive procedures to which most IM or pediatrics residents have little exposure. This translates into effective management of all acute emergencies that occur in the hospital and makes these residents a tremendous asset in any type of critical care and cardiac arrest situation. Meanwhile, the combined program residents will find that their knowledge of a wide range of acute and chronic disease pathology serves them well in the ED. This knowledge is especially invaluable when rotating on trauma or surgical services, where the combined program residents are often more knowledgeable of internal medicine or pediatrics than most surgeons.

There are, however, several difficult aspects of a combined residency. During the initial years, combined program residents have not completed as many

months in each discipline as their categorical colleagues have. This can be a source of some consternation, especially as they begin to assume supervisory roles over younger residents. With the degree of overlap between disciplines, this insecurity rapidly fades. As the combined residents approach the end of their third year of training, most of their friends who started the categorical program at the same time will begin to look for jobs or fellowships. This is a difficult time for the combined resident who is now slightly more than halfway through his or her training. However, with exposure to so many different rotations, there are constantly new challenges, and the length of the residency truly feels much shorter than five years. Note that this statement and concern apply to the majority of combined programs where the categorical EM commitment is for a 3-year program. This does not really apply as well to combined programs where the categorical program in EM is 4 years long.

### LIFE AFTER RESIDENCY

A recent survey of combined program directors shows that over 50% of graduates of combined programs have gone on to pursue academic careers.<sup>1</sup> Most graduates of the combined programs have traditionally practiced only one or the other discipline. However, many of the newer residents have greater expectations (and are more realistic) about how to work in both specialties. As a result, many more new graduates of combined programs are recently getting dual appointments and choosing to practice in both fields after graduation, instead of just one or the other.

This has also been facilitated by a recent rise in opportunity for graduates of combined programs to practice in both fields and to have joint privileges after graduation. This recent expansion of opportunities includes hospitalist roles, subspecialty practice, and critical care medicine. The hospitalist field is rapidly expanding with a recent study projecting a potential workforce of 19,000.<sup>2</sup> Combined graduates are exceptionally qualified for these positions, either as their sole profession, or in conjunction with an EM career. Many hospitalists work shifts; therefore, it is more feasible to combine ED shift work with a hospitalist career rather than attempting to maintain a full-time general medicine or pediatrics outpatient practice. The recent increase in the adult and pediatric hospitalist system has increased the opportunity for graduates of combined programs to practice both specialties (EM and IM or pediatrics) together, rather than choosing a career in one field or the other.

Subspecialty training after graduation remains another possibility. For example, a combined resident with an intense interest in cardiology could obtain further fellowship training in cardiology and establish an academic niche in cardiac emergencies.

Critical care medicine is an expanding field at this time. Combined residents

are well suited for managing critical care units at community hospitals or for undertaking further training to procure a position at an academic tertiary care hospital. Recently, ABEM and ABIM approved guidelines for six-year training that will provide physicians the option for triple certification in EM, IM, and Critical Care Medicine. This will represent a third type of combined program, EM/IM/CC.

Rural medicine remains an area that is in high demand for physicians. A combined program graduate with an interest in rural medicine would be more than adequately trained for excellence in this practice setting. Rural medicine requires that the physician working in that geographic area be knowledgeable both in managing chronic disease and acute emergencies, as they are likely to be the only physician available when the need arises. The same is true for international medicine, which is an area of interest for many applicants to combined programs.

### SUMMARY

Combined residencies in EM are well established now after their inception in 1989. The decision to enter a five-year residency should be made after careful consideration of the pros and cons of such a decision. Candidates should genuinely have a passion for both disciplines and be willing to commit the time and effort required in mastering both. The residency itself is an exciting blend of training in IM or pediatrics in conjunction with training in EM. Upon completion, the resident is uniquely trained for a wide variety of careers with continuously expanding options.

### ACKNOWLEDGMENTS:

The authors wish to thank the following program directors for their assistance in completing the survey which provided the aggregate data reported in this chapter:

Kumar Algappan, Carey Chisholm, Peter DeBlieux, Pamela Dyne, Timothy Erickson, Brian Euerle, Dennis Hanlon, David Portelli and Charles Reese IV.

### References:

- 1)Kazzi A, Martinez J, Mattu A. Combined residency programs in Emergency Medicine: Brief report. Personal communication. 2002. Manuscript preparation in progress.
- 2)Lurie JD, Miller DP, Lindenauer PK, et al. The potential size of the hospitalist workforce in the United States. *Am J Med.* 1999;106:441-445.

## 12

## Applicants with Prior Training

## RESIDENT AUTHOR:

Kevin M. Ban, MD (Harvard Affiliated Residency at Beth Israel Deaconess)

## FACULTY AUTHOR:

Daniel R. Martin, MD, FAAEM, FACEP (Ohio State University)

## FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

### ARE THERE OPPORTUNITIES TO TRANSITION INTO THE SPECIALTY OF EMERGENCY MEDICINE FROM OTHER SPECIALTIES OR CAREERS?

Despite recent changes in funding for residency training as a result of the Balanced Budget Act (BBA) of 1997, this is still a great time to transition into Emergency Medicine (EM) from another medical specialty. Job opportunities for board certified emergency physicians (EPs) abound in EM. In 1997, there were approximately 32,000 physicians working in emergency departments (EDs) and only 52% were certified by the American Board of Emergency Medicine (ABEM) or the American Osteopathic Board of Emergency Medicine (AOBEM).<sup>1</sup> According to ABEM statistics, there were 18,553 active diplomates at the start of 2002.<sup>2</sup> In 2001, nearly 1,200 EM residents took the ABEM certification exam for the first time, over 200 more than in 1997, indicating that residency spots in EM have continued to increase. Nearly another 160 EPs currently graduate every year from osteopathic EM residency programs (see chapter 37). This amounts to roughly 1,400 EM residency graduates currently joining the workforce every year. Even though the precise attrition rate of practicing EPs remains to be determined, it is reasonable to state that the number of practicing ABEM- or AOBEM-certified EPs remains considerably lower than the number of positions currently potentially available for legitimately board certified EP employment in EDs across the USA.

The development of EM as a specialty has had a positive effect on the quality of care in EDs around the country. Although more hospitals are requiring that their EPs be board certified in EM, many smaller community hospitals are often staffed by physicians who are not.<sup>1</sup> For physicians considering a fulfilling and lasting career in EM, the completion of a residency in an accredited EM training program and the achievement of certification through either ABEM or AOBEM have become, for over a decade now, an obvious necessity. As stated in the AAEM mission statement, "A specialist in Emergency Medicine is a phy-

sician who has achieved, through personal dedication and sacrifice, certification by either the American Board of Emergency Medicine (ABEM) or the American Osteopathic Board of Emergency Medicine (AOBEM).<sup>13</sup> It is therefore not a surprise that EM residency training is not only the preferred method of preparation for an EM career, but also a requirement by an increasing number of hospitals, medical networks, EP groups and medical staff. EM residency training is also associated with greater income as well as better and lower cost of patient care.<sup>4-10</sup>

### WITH RECENT CHANGES IN RESIDENCY FUNDING, IS IT POSSIBLE TO CHANGE TO ANOTHER DISCIPLINE SUCH AS EMERGENCY MEDICINE?

Recent changes by the Health Care Financing Administration (HCFA) have made changes between residency disciplines more difficult but still possible. The BBA of 1997 stipulated that Medicare direct GME funding (which covers residency salary and benefits) would cover the first three years of the initially declared training period and additional years would be funded at 50% of baseline.<sup>11</sup> For example, let us consider the case of a medical student who initially declared, matched and then engaged as an intern into a family medicine (FM), internal medicine (IM), or pediatrics (Peds) residency. If this intern then subsequently switched to EM after one year of training, the third year of the EM residency (i.e. the fourth postgraduate year) would only be funded by Medicare at 50% of baseline. This means that the hospital or institution would be responsible for the difference. Similarly, if the resident completed an IM, FM or Peds training program, then all three years of the subsequent EM residency would be funded at 50% of baseline. Interestingly, when transitioning from other disciplines such as surgery, the number of years fully paid by Medicare can be up to 5 years. Therefore, residents transitioning from general surgery after two years can complete a three-year EM program without any funding limitations.

According to a recent survey by the Council of EM Residency Directors (CORD), despite these guidelines, 80% of EM programs continue to take residents with previous training.<sup>12</sup> The remaining 20% of programs either did not consider applicants with previous training or placed limits on the amount of previous training that was acceptable. This limitation is usually a function of the institution and not the training program. Although most EM programs currently accept applicants with previous training, this may continue to change in the future and applicants should definitely inquire regarding the presence of specific institutional policies.

## IS PREVIOUS TRAINING IN ANOTHER SPECIALTY AN ADVANTAGE OR DISADVANTAGE WHEN CONSIDERING THE TRANSITION TO EMERGENCY MEDICINE?

In general, the advantages of previous training outweigh the disadvantages. From a residency program director's (PD) point of view, physicians with prior training tend to become more experienced residents compared to those residents that have just completed medical school: they usually demonstrate a superior level of clinical acumen and a better comfort zone when dealing with patients. Residents with prior experience excel on off-service rotations as well as in the ED. These residents have typically already obtained some ED experience during their previous training.

Despite the advantage experience offers, some PDs may be wary about applicants who have had difficulties in other specialties, or residents who are entering EM for the wrong reasons. It is reasonable to expect a number of PDs to be concerned that physicians with prior training may be difficult to teach and may have developed practices that may not easily and rapidly adapt to the practice of EM. It is imperative for residents who are transferring to EM to have considered the difficulties of actually making this transition from another specialty and to be willing to concentrate on their own weaknesses, many of which will relate to the type of their initial training. It is also important for them to be willing to use their experience and strengths to assist their colleagues and to cautiously avoid being overconfident.

A significant percentage of the EM residency applicant pool is composed of physicians who have previously trained in other medical specialties. In March 2002, 186 (17%) out of 1,073 PGY-I entry positions into the 125 allopathic EM programs were filled by *independent applicants*.<sup>13</sup> Of those, 55 were filled by US physicians who had already graduated from US medical schools. They include graduates who failed to match the year before in EM. However, it is reasonable to assume that many of these physicians were training in another specialty or had already completed such non-EM training. The reasons for changing careers to EM vary. Some applicants had very little exposure to EM during medical school while others are attracted by the lifestyle and excitement the specialty offers. These residents should be prepared for the intensity of EM training programs, which often include many surgical, medical, and critical care rotations in addition to intense time in the ED. Regardless of the motivation for the career change, these are some important considerations when making the transition from another medical discipline.



## IS IT POSSIBLE TO RECEIVE CREDIT FOR MONTHS ALREADY COMPLETED IN ANOTHER TRAINING PROGRAM?

One of the advantages for applicants who have previous training is gaining credit for work completed in another specialty. ABEM and AOBEM require PDs to apply for credit so that any non-EM-related months already completed by transitioning residents serve towards early completion of residency training or allocation of time for elective months. Any attempts to receive credit for previously completed months must be made and approved by ABEM or AOBEM prior to starting the EM program. Residents can receive a maximum of six months for previous training if credit is approved by one of these boards. These previously completed months must be completed within the previous five years prior to applying for EM training.

## WHAT OTHER DIFFICULTIES SHOULD A PHYSICIAN WITH PRIOR TRAINING EXPECT IN THIS TRANSITION TO EM? AND HOW CAN THE TRANSITION BE FACILITATED?

The transition from another medical specialty into EM, while well worth the effort, can be arduous initially. In many ways, the first year of EM is more difficult than the first year in many of the other specialties. While other specialties like surgery or obstetrics/gynecology (OB/GYN) can be very tiring and stressful in the first few years of training, one tends to work in a more dependent manner with almost all activities prescribed by senior residents and attending physicians. In EM, residents must adapt to fast pace and unpredictable loads of high acuity. This is learned gradually; EM residents, however, are expected early on to function fairly independently in the ED, at least up to the point of presenting the case to the senior resident and attending. Such heavy reliance on sound clinical judgment early during residency training is often unavoidable in EM, despite ED nursing triage and the stated chief complaint, you just never know what clinical and non-clinical challenges the next chart will entail. In addition, EM training often requires you to challenge yourself with increasing numbers of patients and greater patient acuity even in the early years of training. At times there is no buffer zone between the resident who is new to the specialty and the attending physician who has been "doing it for years." At first, this may manifest itself as fear, anxiety, or self-doubt in a transitioning resident whose expectation is that they should already know the answer. Despite these difficulties, there will be close supervision of patient care and of resident progress throughout EM training within an established framework based on the ACGME requirements for EM.

Regardless of which specialty the resident trained in previously, he or she can expect major differences in EM training. The former surgical resident, who has been accustomed to spending hours in the operating room, rounding on



patients, and rotating on services mainly in the surgical subspecialties, will now perform procedures in the ED and rotate on a variety of surgical, medical and pediatric services. Similarly, former IM residents, accustomed to rounding on patients multiple times per day, performing thorough work-ups, and spending hours searching through old records and baseline labs, will now spend less time with patients and present them concisely with less information and more focus on clinical history and examination. They will also rotate on surgical, pediatric and OB services with which they have had very little exposure since medical school.

One additional challenge that is peculiar to EM training is the lack of down-time during ED clinical shifts. All other disciplines have down-time when patient care responsibilities are less intense; there is time to read or relax, to go to the cafeteria, meet some colleagues, and shoot the breeze. This is not an option when rotating in the ED. EM practice tends to be very intense with little time for relaxation during a shift. Although this is directly related to the root that makes an EM career exciting, it can also be an intimidating part of the practice, especially for those who are not committed to the field or who drift into covering ED shifts in settings where the shortage for adequately trained EPs persists.

In this regard, all EM residencies provide residents with an organized orientation program for new residents. This orientation usually includes scheduled activities that 1) present the institutional and EM program expectations, 2) teach in focused didactic sessions and practical workshops the skills that are essential for the most common clinical challenges and procedures, and 3) provide early opportunity for residents to socialize with their senior colleagues. Program expectations of residents in the first year of training take into account the difficulty of learning such a large body of clinical information in a relatively short period of time. Residents are expected to improve as they gain more experience in the ED. There is a certain amount of patience required, especially in the first year of training since the learning curve is very steep. All programs also offer elective time to concentrate on any areas of weakness that is identified during the training.

Another obstacle encountered by physicians who plan to transition into EM is the requirement to serve *again* in the capacity of an intern or junior resident. Being *demoted* in the medical hierarchy with respect to rank and salary, at times, can be a frustrating and humbling experience. This is particularly true for anyone who has completed a previous residency and worked as an attending, or anyone who has already "paid their dues" as a junior resident in another specialty. One must be able to appreciate the value of repeating various experiences in order to learn the basics of EM. Although some PDs claim

that residents with prior training are more likely to be very difficult to teach, the predisposition and potential for learning vary with each individual. There are countless examples of leaders in EM who had prior training in other disciplines before going through an EM residency. However, it probably would make sense for the transitioning resident to make a conscious effort to act "teachable" to dispel any generalizations or misconceptions their instructors may have regarding previous training.

#### ARE THERE ANY FINAL WORDS OF ADVICE TO RESIDENTS OR PRACTICING PHYSICIANS CONSIDERING TRANSITIONING INTO EM?

1. Carefully consider the practice of EM including the pros and cons of an EM career, its pitfalls, rewards, challenges and associated lifestyle. Make sure your decision is an informed choice and not an exit way or a reaction to your discontent with the first discipline that you chose.
2. Consider that the next three or four years of training will be intense, exciting, and empowering. It will offer one of the steepest learning curves of any specialty. If there are questions about EM training, review the specialty requirements available on the ACGME web page.
3. If EM is your passion and career goal, it can still be achieved regardless of the type or duration of previous training.
4. Make a conscious effort to turn your previous training into an advantage to you and to your new colleagues.
5. Choose specific attendings and senior residents as your mentors and strive to improve your skills to their level by the time you complete your training.
6. Remember: this will be the last and best organized learning experience that you will have the opportunity to participate in for the rest of your career. So make the most of it!

## References:

- 1) Moorhead JC, Gallery MD, Mannle T, et al. A study of the workforce in emergency medicine. *Ann Emerg Med.* 1998;31:595-607.
- 2) ABEM Application and Examination Activity Recertification. American Board of Emergency Medicine report at the 2002 Society for Academic Emergency Medicine, Saint Louis, Missouri, May 2002, [www.abem.org](http://www.abem.org).
- 3) AAEM mission statement. <http://www.aaem.org>.
- 4) McNamara RM, Kelly JJ. Impact of an emergency medicine residency on the quality of care in an urban community hospital emergency department. *Ann Emerg Med.* 1992;21:528-533.
- 5) McNamara RM, Kelly JJ. Cost of care in the emergency department: Impact of an emergency medicine residency. *Ann Emerg Med.* 1992;21:956-962.
- 6) Branney SW, Pons PT, Markovchick VJ, Thomasson GO. Malpractice occurrence in emergency medicine: Does residency training make a difference? *J Emerg Med.* 2000;19:99-105.
- 7) Katz B. Job Searching on the Web & the Emergency Medicine Market for 2001/2. EMRA Life after Residency. American College of Emergency Physicians Scientific Assembly 2001; ACEP Program Syllabus, page 15.
- 8) Katz B. Personal communication. The Midwest Salary. Compiled for Premier Healthcare Services of Ohio by the Cambridge Group, Ltd., March/April, 2001. The Katz Company, Inc. Tampa, FL; [katzco@tampabay.rr.com](mailto:katzco@tampabay.rr.com).
- 9) Katz B. Personal communication. Virginia Salary Survey. Compiled for the Lewis Gale Clinic, Salem, VA, by the Cambridge Group, Ltd. March/April 1999. The Katz Company, Inc. Tampa, FL; [katzco@tampabay.rr.com](mailto:katzco@tampabay.rr.com).
- 10) Katz B. Personal communication. Emergency Medicine Salary Survey 2001-2 (for physicians who are not ABEM or AOBEM boarded in EM). The Katz Company, Inc. Tampa, FL; [katzco@tampabay.rr.com](mailto:katzco@tampabay.rr.com).
- 11) Dickler R, Shaw G. The balanced budget act of 1997: Its impact on the US teaching hospitals. *Ann Int Med.* 2000;132:820-824.
- 12) Martin DR, Kazzi AA, Wolford R, Holliman CJ. Report from the Council of Emergency Medicine Residency Directors Subcommittee on graduate medical education funding: Effects of decreased medicare support. *Acad Emerg Med.* 2001;8:809-814.
- 13) Binder L, Jouriles N. The 2002 NRMP Match in emergency medicine. March/April SAEM Newsletter. 2002;14:18-19.



## 13

Couple's Match in  
Emergency Medicine

## RESIDENT AUTHOR:

Robert W. Collins, MD (Indiana University) & Ann C. Collins, MD (Cornerstone Family Physicians, Indiana)

## FACULTY AUTHOR:

Wendy C. Coates, MD, FACEP (Harbor-UCLA Medical Center)

## FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

Welcome to the adventure of the *Couples' Match*. Both you and your significant other have worked hard to reach this point in your careers. You have found your niche in Emergency Medicine (EM) and look forward to a stimulating and rewarding career. Your partner is equally enthusiastic about his or her specialty choice. Together, you are about to share the excitement of seeking out the best residency training programs to prepare you both for successful medical careers.

The "*Match*" is a complicated process for everyone (see Chapter 1) but it can seem exponentially more complex for couples. Along with cheerful anticipation of the adventures to come in residency, you will also experience trepidation and anxiety when faced with the impending life decisions which will affect not only your training but your relationship as well. The key to success is good communication. With careful planning, the strength of your relationship can ease the usual anxiety of the matching process. The rigors of matching into EM may place additional stressors on your relationship. Expect the anxiety, acknowledge it, and work together to conquer it.

The first step in the *Couples' Match* is to decide if it is right for you. The *Couples' Match* was introduced by the National Residency Match Program (NRMP) several years ago to facilitate the matching process for people who needed to coordinate their residency locations.<sup>1</sup> The system enables two individuals to enter paired choices for residency and gives them the opportunity to broaden their scope to a wide variety of geographic locations. Anyone is eligible to participate in the *Couples' Match*. Married or engaged couples, same-sex partners, siblings, and close friends may consider participating. It is important to realize that linking your list with someone else's can have a profound impact on where you match for your postgraduate training. Carefully and honestly examine the strength of your relationship as well as your feelings about where you wish to train. Many married couples would consider nothing other than using the *Couples' Match*, while others may consider a period apart during

training to be acceptable.

The next important step is to understand how the rank list for the *Couples' Match* actually works. Together you will make one rank list with two columns. You may list the same programs in multiple combinations if you wish. Depending on your specialty choices and living arrangements, you may be looking to match at the same hospital, or at different hospitals in the same locale. Many couples consider geographic areas with several programs in each specialty. This is especially important for a competitive specialty like EM. The order you choose should be based solely on your preferences as a couple. Make sure to list all program combinations that you would consider acceptable, and list highly those you desire most, regardless of your perceived chances of matching to those programs. Interestingly, the top combined choice of the couple may not contain each individual's number one program. Once complete, your combined list is electronically compared with the rank list of the programs that you have ranked.

The National Residency Match Program computer goes down your list until it finds a pair in which both partners match with the program lists. An example is illustrated below:

**Match List**

<u><b>Michael</b></u>	<u><b>Mary</b></u>
1) Hospital A	Hospital 1
2) Hospital A	Hospital 2
3) Hospital A	Hospital 3
4) Hospital B	Hospital 4
5) Hospital C	Hospital 4
6) Hospital D	Hospital 5
7) Hospital A	Hospital 6
8) Hospital E	Hospital 7
9) Hospital F	Hospital 8
10) Hospital F	Hospital 9
11) Scramble	Hospital 1

In this example, let us assume that as a solo applicant, Michael would have been ranked highly enough by the programs to match at Hospitals B, C, D, E, and F; and that Mary would have matched Hospitals 1, 2, 3, 6, 7, 8, and 9. In this scenario, as a couple, they would match with the eighth pair on their rank list. Note that Michael will train at the program (Hospital E) which would have been fifth on a list he generated independently. Without participating in the *Couples' Match*, he could have trained at his second choice program (Hospital B). Similarly, if Mary had applied alone, she could have matched at her top choice program (Hospital 1).

Generating the *Couples' Match* rank list will likely require multiple revisions. Each person should start by independently creating a list of programs in order from most to least desirable. Then, block out several hours during a day when both you and your partner are rested and begin the process of negotiating a combined rank list. You can try placing each proposed combination on an index card that can be rearranged easily. Be willing to compromise. Neither career is more meaningful than the other. The final list that you generate together is likely to be considerably longer than those of most single applicants. This is often the result of the many possible variations of pairing the couple's residency preferences.

A final option is to consider including a "scramble" at the bottom of one or both of your lists. For example, if Michael and Mary had not matched at any of their paired choices, and if Mary had been ranked highly at Hospital 1, they would have matched at position number eleven. Mary would be guaranteed a training position at Hospital 1 and Michael would then need to scramble into a vacant residency position that was not filled in the Match. This may be a dangerous strategy for Emergency Medicine. As one of the most competitive specialties, there are very few positions left unfilled in the national Match. This could result in an applicant having to scramble to a position in another medical specialty. Each couple must come up with a strategy that works for them.

When considering where to apply for residency training, many factors come into play. First, you must honestly examine the strengths of each partner and how competitive each is within the chosen specialty. An academically weaker candidate should apply to a wider range of programs to increase the chance of matching in a competitive specialty. The partner would in turn need to widen the scope of his or her residency search in a complementary fashion. In general, partners in a *Couples' Match* will apply to more programs than those in the solo Match due to the added layer of complexity of the *Couples' Match*. It is advisable to begin with a broad search and narrow the list as you get a better feel for both your preferences and your competitiveness as you go through the interview process.

Another aspect to examine is the strength of prospective support systems available to you as a couple in the various locations being considered. Residency training, while rewarding, is often physically and mentally demanding. As a physician couple, you form an intrinsic support system for each other. However, the time constraints and pressures of residency may challenge your relationship, especially if you have children or aging parents who rely on you for support. A strong support network can provide encouragement and ease the loneliness that can occur when call schedules do not compliment each other. Family members, close friends, church or community organizations, and other resi-

dents are good sources for your support network.

The interview process while initially intimidating, should be an enjoyable and informative opportunity to explore and evaluate different training options. Residency programs are not able to determine that you are participating in the *Couples' Match* unless you choose to share this information with them. Some people feel it is unnecessary to discuss this during their interviews, while others see it as a benefit. The beneficial effects may be realized most profoundly for the "weaker" member of the couple. Some programs may be quite accommodating in helping you to coordinate interview dates with your partner's interviews in the same location.

Unfortunately however, 76 EM training sites currently have restricted dates for interviews due to the volume of applicants they must process. In some cases, they may be unable or unwilling to accommodate coordinated schedule requests. If possible avail yourselves of the cost advantages of sharing hotel and travel costs by coordinating interviews when you can. It can be a fun adventure to explore the community amenities and housing options together in each region you are considering. The partner of the interviewing applicant should not participate in the actual interview day unless he or she is interviewing in the same program. If there are social events planned such as a dinner with current residents, this would be a good time for your partner to rejoin you. If no social events are planned, your partner may be better served exploring the region and housing options during your interview day.

Although the *Couples' Match* may initially appear to be complicated, it facilitates the process of enabling partners to obtain postgraduate training in proximity to one another. The *Couples' Match* can provide an excellent opportunity to reevaluate the strength and direction of a relationship. With good communication between the partners and their advisors, an exciting joint venture can unfold that is fueled by the strength of the couple. Good luck!

#### References:

- 1) [http://www.nrmp.org/res\\_match/special\\_part/us\\_seniors/couples.html](http://www.nrmp.org/res_match/special_part/us_seniors/couples.html)



## 14

## Scrambling for a Spot & Going Outside the *Match*

### RESIDENT AUTHOR:

Adrian Crisan, MD (Martin Luther King, Jr. / Charles R. Drew Medical Center, Los Angeles)

### FACULTY AUTHOR:

Deana Baudonnet, MD (Martin Luther King, Jr. / Charles R. Drew Medical Center, Los Angeles)

### FACULTY EDITOR:

Pamela L. Dyne, MD, FAAEM, FACEP (UCLA/Olive View-UCLA)

### WHAT IF I DO NOT "*MATCH?*"

Given medical students' preoccupation with getting into a residency, it is not surprising that one would explore all possibilities facing them during one of the most notorious rituals of medical education. Even the most confident student may be perplexed by the ambiguous mechanics of the residency selection process. The inevitable fact of "*Match Day*" is that some students will not have secured a spot in their residency of choice. During these past few years, Emergency Medicine (EM) has become a very competitive field, and only a few positions are left *unmatched*. Therefore, even *scrambling* will be extremely competitive. However, having a back-up plan will undoubtedly be of great benefit.

All of the *Match* results are available to applicants via the Web, over a four-day period during *Match Week*. Applicants will find out their *Match* results either through e-mail notifications or by logging on to the National Resident Matching Program (NRMP) website beginning at noon EST on Monday of *Match Week*. In addition, those applicants who did not *match* will have the opportunity to secure an unfilled position in a residency program. The list of unfilled programs will become available beginning at noon EST on Tuesday of *Match Week*.

### WHAT IS "*SCRAMBLING?*"

The *Scramble* is the process that attempts to place *unmatched* applicants into any unfilled residency positions. Generally, the *unmatched* applicant will try to *scramble* for a vacant residency position in the field in which they initially applied, or he/she may decide to switch into a different field, or choose to seek a preliminary internship spot. However, *scrambling* will not guarantee the applicant will secure a residency position by the end of the *Match* process. Given the popularity of EM, very few positions go unfilled in the *Match*. In 1999, 32 positions remained unfilled. In 2000, this number dropped to 8 and in 2001, the number of vacancies was nine. Clearly the number of available posi-

tions to *scramble* for is very limited.<sup>1,2</sup>

More recently, despite a 5% growth in EM entry positions (63 new spots) available in March 2002, there were only 20 out of 1073 (2%) PGY-I and 5 out of 138 (4%) PGY-II entry positions left unmatched and available for the *Scramble*.<sup>3</sup> Overall 98% of all available positions were filled through the *Match*, again and again one of the highest two of any specialties participating in the NRMP. Corresponding to that, March 2002 reflected a growth of 34 additional US seniors seeking an EM residency spot. Overall, the unmatched rate for US seniors applying to EM programs remained for the last 3 year between 6.5% and 7%. Data shows that 93-94% OF US allopathic senior medical students who apply for an EM spot will match in one.<sup>3</sup>

### WHAT DO I DO TO "SCRAMBLE?"

But if you find on Monday that you have not *matched*, Tuesday you need to consider *scrambling*. The *scrambling* protocol may differ among the many US medical schools. For students applying to highly competitive residencies, such as EM, going *unmatched* and subsequently *scrambling* is always a possibility. The Office of Student Affairs will offer assistance to students who wish to *scramble*. Therefore, it is recommended that applicants individually contact them in advance to determine what is required of students in the event they go *unmatched*. Typically, the *unmatched* applicant must contact all unfilled programs and negotiate a position personally over the phone. Requesting the assistance of the career advisor or of one of the EM faculty members who wrote a letter of recommendation for the applicant may be very useful.

Also, a previous (preferably strong) relationship at your medical school with the EM Program Director (PD), the Associate/Assistant Director, the chair, or a well-known member of the Council of EM Residency Directors (CORD) can be invaluable. They may be willing to speak to the EM Program Director at the residency with the unfilled spot on your behalf. They will likely even be more effective at reaching the PD who is probably getting literally hundreds of calls that morning from all over the nation for that spot.

Applicants should have their complete application packet available (including letters of recommendation, Dean's letter, etc.) so it may be forwarded to all programs requesting such materials. Immediate access to the Internet and a phone /fax line is essential for this process. If you applied in the Electronic Residency Application Service (ERAS) you have everything available on-line. Using the ERAS site, add the program to "My Programs" and complete the payment process. For further information, see the ERAS post-*Match* site at <http://www.ecfm.org/eras/match>. If the program requests a fax of your information, you will have to provide that yourself, but letters will have to be forwarded from your Dean's or Admissions Office directly to the program.

The letters are considered a confidential correspondence from the author to the PD of the respective programs. Provide the appropriate contact numbers for your Dean's office to fax the letters so that confidentiality may be maintained.

#### WHAT IF I CANNOT GET A RESIDENCY POSITION AT THE END OF THE *MATCH*?

Hundreds of EM applicants will not be able to secure an EM residency position through either the regular *Match* or *Scramble*. These applicants may have to take a realistic look at their chances before starting to reapply. They will have to assess their own aptitudes and decide on a program that is right for them.

A preliminary year in internal medicine, surgery, or a transitional year program will prepare you to start a 2-3-4 program if a spot opens or give you additional experience before starting a 3-year program. Generally, PGYII positions in a 2-3-4 program are filled the preceding year. There maybe an opportunity to fill a spot if you are prepared. A 2-3-4 program requires an intern year or preliminary year in Surgery, Medicine, or a Transitional Year. Consider a Transitional Year Program, which will provide you with a well-rounded experience focusing on fundamental clinical skills. This may be your best alternate plan since it includes two elective rotations during which you may have the option of an EM rotation. Consider other avenues with your advisor or mentor and discuss whether retaking the Boards, undertaking additional postgraduate studies, or initiating research is a viable option. However, prior to engaging in any of these activities, contact residency directors at programs where you intend to reapply to find out whether they will consider accepting an applicant in your position given the changes you plan to implement.

#### OTHER WAYS TO FIND EMERGENCY MEDICINE SPOTS "OUTSIDE THE *MATCH*"

If EM is still a serious consideration, there may be a few more options. There always exists the possibility that positions were not filled in either the *Match* or the *scramble*. Throughout the academic year, such rare opportunities arise. Programs may have vacancies past July 1<sup>st</sup> for a variety of reasons, and you may be able to take advantage of them if you know how to proceed. Of course, to hear about their availability, a good relationship with the PD or a member of CORD is invaluable, since these positions are first advertised on the CORD private electronic list service. There also exist Internet sites to keep you informed of residency vacancies.<sup>4</sup> Check the Society for Academic Emergency Medicine (SAEM) "Residency Vacancy" site at <http://www.saem.org/resvacan.htm> periodically. Also, the American Association of Medical Colleges (AAMC) has a site "Find a Resident" at <http://aamc.org/>

find a resident that matches programs and residents. Be prepared to spend up to an additional year depending upon when in the academic year you enter the program. It should be worth it to you to spend possibly an extra year meeting all the requirements for graduation.

Note that many of these positions are for PGY-II, -III or -IV residents. The residency program that is advertising such a position has usually lost a resident for one reason or another. Occasionally, the program has been approved for an increase in the size of its class. It is typically seeking residents from other programs who want to transfer for one reason or another, to fill that position and to carry the clinical load that the departed resident left for his or her colleagues to share. To *match* a student who has not completed any EM training considerably complicates issues related to Emergency Department (ED) resident schedules, rotations in other departments, expected level of performance, and graduate medical education funding for the position. This is particularly impacted by the strict American Board of Emergency Medicine (ABEM) expectation that a minimum of 3 years of EM training must have been completed in an EM residency program. Programs and residents, who transfer into EM programs and apply to ABEM requesting credit for equivalent rotations while training in another specialty, will find there is no guarantee that such credit will be granted. ABEM is typically very strict in its requirements and scrutiny of this process.

## CONCLUSION

The possibility of not *matching* and *scrambling* for an EM position is real and it takes work and organization for success. If you find yourself in this position, do not panic. Act quickly, and solicit help from your Student Affairs' Office and from your advisor or mentors.

## References:

- 1) [http://www.nrmp.org/res\\_match/data\\_tables.html](http://www.nrmp.org/res_match/data_tables.html)
- 2) <http://www.saem.org/inform/match.htm>
- 3) Binder L, Jouriles N. The 2002 NRMP match in Emergency Medicine. *SAEM Newsletter*. 2002;14:18-19.
- 4) <http://www.careermd.com/>

## 15

Moonlighting and  
Emergency Medicine

## RESIDENT AUTHOR:

David T. Huang, MD (Henry Ford Hospital, Detroit/University of Pittsburgh)

## FACULTY AUTHOR:

Carey D. Chisholm, MD, FAAEM (Indiana University)

## FACULTY EDITOR:

Mark I. Langdorf, MD, MHPE, FAAEM, FACEP (University of California, Irvine)

## INTRODUCTION

What exactly is moonlighting and why should it matter to you? The answer is that the current practice of moonlighting strikes at the very essence of your future career, your specialty, and your patients' safety.

State Medical Licensing Boards and consumer groups consider board certification by the American Board of Medical Specialties (ABMS) to be the only standard proper and, often, legal to certify the specialty training and certification of health care providers. Accordingly, "board certified in Emergency Medicine" refers *only* to certification through either the American Board of Emergency Medicine (ABEM) or the American Osteopathic Board of Emergency Medicine (AOBEM).

Moonlighting encompasses any clinical activity beyond one's residency program work requirements. For the purposes of this article, we will focus on the practice of engaging in additional clinical activities for financial remuneration. Moonlighting may be performed within the teaching hospital in which one is doing his/her residency, or in clinics, inpatient units, transport services and emergency departments (EDs). However, the majority of moonlighting continues to occur in EDs. Historically, 30-40 years ago, many hospitals forced all their physicians regardless of their specialty certification to work occasional ED shifts as a requirement for hospital privileges. This led to the widespread perception that anyone could *successfully* practice Emergency Medicine (EM). A 1981 GME report even stated that there was no need to train many EM specialists as half of all ED jobs could be filled by "semi-retired practitioners and moonlighting residents from other specialties." This misunderstanding of our specialty was demonstrated again in 1992, when Hillary Clinton advised a heavily indebted medical student that he "could always moonlight in an emergency room and make extra money."

As the specialty continued to evolve, many hospitals turned to EM groups and Contract Management Groups (CMGs) to provide continuous coverage for

their EDs. Hiring non-EM trained physicians or highly indebted and underpaid residents became an attractive option for these groups, as these physicians were often willing to work inconvenient hours and accept less pay. This helped fix scheduling difficulties and improved profit margins for some EM groups and CMGs. The landmark 1994 Josiah Macy Report on the Future of Emergency Medicine decried the fact that "the presence of physicians in EDs who are neither adequately nor appropriately trained is not conducive to high quality emergency care... Many EDs continue to be staffed with physicians who have as little as one year of GME." Unfortunately, 7 years later, despite the proliferation and popularity of EM programs around the country, this state of affairs has improved only marginally.

### SO WHAT DOES THIS HAVE TO DO WITH ME?

The American Medical Association (AMA) estimates that about 30% of all residents/fellows moonlight, again mostly in EDs. A 1995 Society for Academic Emergency Medicine (SAEM) survey, a 1997 Harvard survey, and a 2000 Emergency Medicine Residents Association (EMRA) survey all found that approximately 50% of all EM residents moonlight, the majority of moonlighters being senior EM residents.<sup>1-3</sup> Within EM, fairly broad consensus exists that it is inappropriate for non-EM residents to moonlight in EDs. The practice of EM has become increasingly more sophisticated over the past 30 years, and non-EM residents clearly do not have the breadth of experience nor exposure to the variety of patients needed for EM practice.

Considerably more controversy surrounds the question of whether or not it is appropriate for EM residents to moonlight in EDs. Before we delve into this issue further, consider the following two statements:

- EM is a true specialty and is best practiced by Board Certified/Residency Trained Emergency Physicians.
- EM residents should be allowed to independently practice Emergency Medicine, before completion of their training.

As you read through the next sections, ask yourself how these two statements can be reconciled.

### WHY DO EMERGENCY MEDICINE RESIDENTS MOONLIGHT?

The primary reason is financial. In the previously noted SAEM survey, 66% of moonlighting residents reported that financial pressures, primarily educational debt, were the main reason they moonlighted. The combination of large student loans, relatively low resident salaries, and for some, the strain of supporting a family, drives many residents to moonlight. Conversely, some studies have shown only a weak correlation between amount of educational debt and prevalence of moonlighting.<sup>2,4</sup> Another often-cited reason is that moonlighting

enhances one's training, by affording greater autonomy and a different practice environment from the teaching hospital. Some also believe that moonlighting enhances one's job prospects after graduation as some ED directors dislike hiring new residency grads without any previous independent experience.<sup>5</sup>

Many also argue that if physician assistants (PAs) and nurse practitioners (NPs) can practice independently in low acuity urgent care centers/fast-tracks<sup>6</sup>, then certainly so can emergency medicine residents, given our more arduous and lengthy training. This is perhaps one of the strongest arguments for resident moonlighting, because fast tracks may be the ideal place for residents to moonlight, given their lower acuity. As mid-level health care practitioners (PAs, NPs, nurse anesthetists) gain greater autonomy through their vigorous government lobbying, it may seem foolish to restrict the practice of a 4<sup>th</sup> year EM resident. Currently, over 50% of the states allow independent practice of NPs, without any physician supervision or even collaboration, while 100% allow some degree of prescriptive authority as well as direct Medicare/Medicaid/commercial insurance reimbursement. In 2000, the federal government, over the strenuous objection of anesthesiologists, decided to allow independent billing and practice of nurse anesthetists in many settings. As of this writing (December 2001), the Bush administration continues to re-examine this issue, but the final outcome will still most likely include significantly greater autonomy to non-physicians.

EM residents may also actually provide higher quality care in rural or underserved areas where few board certified EM specialists are available. These area EDs are often staffed by the aforementioned "semi-retired practitioners and moonlighting residents from other specialties". Finally, many point to a 1998 American College of Emergency Physicians (ACEP) Workforce study that estimated that 32,000 EPs were needed nationwide to staff our country's EDs while only 16,000 board certified EPs existed. With the proliferation and popularity of EM residency programs, this problem may eventually be resolved, but in the meantime this discrepancy continues to make ED coverage difficult. Of course as with all physicians, geographic disparities predominate, with many major cities having a surplus of physicians, while smaller, less popular areas suffer from a shortage.

#### WHY IS THE AMERICAN ACADEMY OF EMERGENCY MEDICINE (AAEM) AGAINST INDEPENDENT MOONLIGHTING BY RESIDENTS?

The answer is simple: **to provide quality of patient care and to protect the integrity of our specialty.** A resident, by definition, is a physician-in-training, and can not be expected to be fully prepared for any unexpected patient care



situation that may occur in an ED at any time. A 1995 survey of EM residents found that approximately 16% felt unprepared for complex case management or were required to do unfamiliar procedures and that 25% felt overwhelmed by patient volume.<sup>1</sup> A 2000 EMRA survey noted that 2% of moonlighting residents admitted to having a bad patient outcome due to lack of clinical experience.<sup>3</sup> A 1998 survey of senior EM residents found that only 54% were willing to be treated for a moderate illness or injury by an independently working resident and that only 23% were willing to be treated for a severe illness by a resident alone (willingness to be treated only by a PA or NP was drastically lower).<sup>7</sup> Juxtapose this information with the fact that 95% of EM residents want to be able to moonlight, and that 22% want to moonlight under any circumstances, including single coverage EDs. This begs the question of why we as EM residents, want a higher level of care for our own illnesses than we ourselves are able to provide when moonlighting.<sup>3</sup>

Emergency Physicians have historically been very strong advocates for our patients, and our advocacy should include assuring that every patient seeking care in an ED can expect the highest quality of emergency medical care. Patients are often at their most vulnerable point in their lives when seeking emergency care. As a member of a profession, we are expected to place the needs of our patients above our own. Engaging in independent moonlighting as an incompletely trained resident physician may be viewed as placing one's own financial needs above the needs of one's patients.

Going back to those earlier two statements, how can we ask our future employers to place value in our residency training, when they were hiring us as independent staff during residency? Why should they pay you a fair salary when you were willing to accept significantly less reimbursement as a resident? Even more bluntly, why should they pay you a fair salary when they can hire your junior resident for a cheaper price?

Within the worlds of medicine and government, which impact our practice, how can we earn respect from our medical and surgical colleagues and government officials as a true specialty, when they know that we allow incompletely trained EM residents to practice EM independently? What's the point of our training then and why even enter a residency program? Surgical residents cannot operate independently because the American College of Surgeons makes it very clear that every operation must be done by, or in the presence of, a board certified surgeon. Why should we have lower standards than our medical colleagues in other specialties?

Finally, there are other very important downsides to moonlighting. These include losing time that could be spent in research, study, improving one's residency, family activities and much needed sleep and rest. Traveling to and from



a moonlighting venue also may expose a fatigued resident to increased risk from automobile accidents. It also demeans ACGME mandated residency work hour limitations and resident credibility when advocating for reduced workloads. And lastly, EDs that hire residents to moonlight often have significant problems with specialty backup. This exposes the moonlighting resident to increased risk of malpractice litigation, while malpractice insurance in these venues can be tenuous. A 1995 survey showed that 37% of moonlighting residents either did not know what kind of malpractice insurance they had, or admitted to none at all. Two percent admitted to having been sued for malpractice while moonlighting.

### WHAT DO OTHER ORGANIZATIONS THINK ABOUT MOONLIGHTING?

The AMA does not have an official stance, other than endorsing the current requirement in most states that only one year of residency be required before obtaining an independent license to practice medicine, a prerequisite for independent moonlighting. AAEM, the Council of Emergency Medicine Residency Directors (CORD), and SAEM have all firmly stated that EM is a unique specialty and that it is inappropriate for residents to independently practice EM. In June 2001, ACEP endorsed the SAEM position statement on the "Qualifications for Unsupervised Emergency Department Care" and reiterated that "residents-in-training...are less likely to possess the cognitive and technical skill set necessary for rendering unsupervised care for the tremendous breadth and acuity of situations encountered in an ED." One of the authors (D. Huang) worked with EMRA last year to revise its stance on moonlighting. EMRA's current position reaffirms that EM is best practiced by residency trained, board certified EPs, but endorses independent moonlighting by *senior EM residents* in three practice settings: double-coverage EDs (meaning that there will be another physician working with you), low acuity fast tracks (where mid-level practitioners tend to dominate), and in rural/underserved areas. EMRA also stipulates that one must obtain permission from one's Program Director prior to moonlighting.

### IS THERE ANY OTHER POSSIBLE COMPROMISE?

Many hospitals and residency programs allow "in-house" moonlighting, where residents will work extra shifts within their teaching facility. Multiple legal requirements must be fulfilled before creating such a program, but some seem to have had great success. These programs by and large offer slightly greater autonomy, include some mechanism for staff physician supervision, strictly set work hour limits, and provide the familiarity of working within one's own hospital.

Of particular note is the University of Massachusetts Medical Center's comprehensive program for in-house moonlighting by residents and fellows, as outlined in a 1989 issue of JAMA.<sup>8</sup> It is a highly structured program that clearly delineates work hour limitations, liability and supervision. As of late 2000, the program continues to "involve considerable paperwork and computer work... nevertheless, the sites are willing to support the administrative costs of the program... The system continues to work well and there are no plans for major change." (D. Huang, personal communication with one of the authors, 2000)

Recently, a landmark joint statement was issued by AAEM, CORD and SAEM.<sup>9</sup> These organizations proposed the creation of a new "dependent practice of medicine license", which could be issued to residents and allow them to moonlight under supervision by a board certified EP, who would assume liability for their oversight. This would allow residents to make extra money while preserving patient safety and quality of care, as well as reducing malpractice risk for residents. The Federation of State Medical Boards (FSMB) considered this proposal favorably in February 2001. While it has not been adopted by the FSMB, the proposal was considered a positive vehicle that the FSMB would support at the legislative level, as it provided a step towards the original goal of the FSMB to restrict independent medical practice to physicians with a minimum of 3 years of post-graduate training. Some have criticized this statement for seemingly equating residents with physician extenders and for not allowing independent practice. A major court decision held that a resident who moonlights as a full staff physician should be held to that high standard, and not that of a resident.<sup>10</sup> In this case, a 3<sup>rd</sup> year moonlighting radiology resident misread a CT scan, and both the radiology group that hired her as well as the resident herself were held liable, with the court clearly stating that because she was moonlighting as an attending, she would be held to that standard of knowledge, and not that of a resident. The bottom line is that if you act as an attending, and get paid as an attending, you will not be able to hide behind an "I am only a resident" defense.

## CONCLUSION

For now, moonlighting is a personal decision as currently most states will allow you to obtain an independent license after one or two years of residency training. If you do decide to independently moonlight, be sure to get permission from your Program Director and obtain private malpractice insurance. Your teaching hospital's policy will only protect you from mistakes you make while working as a resident in their facilities. Remember that all attending-level EM organizations have stated that EM residents should not engage in the independent practice of EM, further increasing your potential medicolegal liability should you choose to do so. Also, realize your limitations, be doubly careful

with your clinical decisions, and don't be afraid to transfer a patient to a tertiary care facility or ask for help, particularly if you are working single coverage. Many residents I (D. Huang) have spoken to mention that they sometimes call their home ED and ask one of their attendings for advice. If your residency's attendings are willing to do this and possibly expose themselves to risk, take advantage of their greater knowledge and expertise.

### ALWAYS REMEMBER THAT IT IS THE PATIENT THAT MATTERS THE MOST!

Moonlighting has been a controversial subject for decades and most of the arguments are nothing new. What is new, however, is the creation of EM as a unique specialty. Because most moonlighting occurs in EDs, moonlighting is truly *our* issue and it is our responsibility to solve it. EMRA's proposal and AAEM/CORD/SAEM's proposal represent our specialty's first disciplined attempt to reach a solution. An ultimate resolution will not be easy. However, we believe that with enough work and steadfast commitment to the principles of patient care, and our credibility as a unique specialty, balanced with fiscal and workforce realities, that with time a reasonable solution will be found. We hope that when you join our proud ranks on the front line, that you will contribute to our growth as a specialty and perhaps help solve this age-old dilemma. In the meantime, good luck with your *Match*, work hard during your "audition months", and never stop learning more about emergency medicine.

### References:

- 1) Langdorf MI, Ritter MS, Bearie B, Ferkich A, Bryan J. National survey of emergency medicine resident moonlighting. *Acad Emerg Med.* 1995;2:308-14.
- 2) Li JL, Tabor R, Martinez M. Survey of moonlighting practices and work requirements of emergency medicine residents. *Am J Emerg Med.* 2000;18:147-51.
- 3) 2000 EMRA Moonlighting Taskforce Report, presented at May 2000 EMRA Assembly, San Francisco.
- 4) Kazzi AA, Langdorf MI, Brillman J, Handly N, Munden S. Emergency medicine residency applicant educational debt. *Acad Emerg Med.* 2000;7:1399-1407.
- 5) Katz B. Moonlighting, friend or foe? *EP Monthly.* 2001.
- 6) Buchanan L, Powers RD. Establishing an NP-staffed minor emergency area. *Nurs Manage.* 1996;27:25, 28, 30-1.
- 7) Larkin G, Kantor W, Zielinski JJ. Doing unto others? Emergency medicine residents' willingness to be treated by moonlighting residents and nonphysician clinicians in the emergency department. *Acad Emerg Med.* 2001;8:886-892.
- 8) Cohen SN, Leeds MP. The moonlighting dilemma. *JAMA.* 1989;262:529-31.
- 9) Kazzi AA. AAEM, CORD, and SAEM reach a landmark position: consensus recommendations to the FSMB for revisions to the FSMB May 1998 policy statement on physician licensure. *Acad Emerg Med.* 2001;8:393-4.
- 10) Berlin L. Liability of the moonlighting resident. *Am J Roentgenol.* 1998;171:565-7.



## 16

## Designing Your Third and Fourth Years Clerkship Schedule

### RESIDENT AUTHOR:

Fred Goodwin, Jr., MD (Georgetown University / Albany Medical Center, New York)

### FACULTY AUTHOR:

Louis Binder, MD, FACEP (Case Western Reserve University / Metro Health Medical Center, Cleveland)

### FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

## INTRODUCTION

The planning of your clinical years can seem like a daunting task to any student. There are so many questions. What sequence of clerkships is the best? What if I change my mind about what I want to do? This uneasiness escalates with your level of uncertainty about your career choices. For this reason, it is critical to begin to evaluate your interests early and to stay organized and flexible in your planning. The more you know about your strengths, weaknesses, interests, and needs, the easier your planning will be.

Some people have known since they were 15 that they want to become emergency physicians (EPs). Others struggle with several choices and hope that the exposure they get in their third and fourth years will help guide them to the perfect profession. It is also not unusual for people to be "certain" of their choice as they enter third year only to surprise themselves later as they gain experience. For this reason, both groups have the need for a careful analysis of what they want in a career and a re-analysis as they progress through the stages of training. You do not want to be stubborn with this decision. Just because you always saw yourself become a neurosurgeon does not mean that you will be a happy one. This is the time for an open mind and critical evaluation so that you can be as true to your wishes as possible. For this reason, it is important to begin this process in the first two years of medical school. Talk to senior students, go to interest groups, and do everything you can to learn about every specialty that might interest you. Armed with a short list of specialties that you think you will like, you can form a solid plan for how to set up your clinical years.

## PLANNING YOUR THIRD YEAR

As the third year approaches, most students are excited to get out of the classroom and get some "real world" clinical experience. Students, however,

are confronted with the task of planning their curriculum. This can be a very stressful time for them due to their own uncertainty, varying thoughts about the "best" third year design, and opinions of peers who claim to have it "all figured out."

The key to a well-designed 3<sup>rd</sup> year is a well thought out short list of specialties that interest you. Do not worry; this is by no means a firm commitment. On the contrary, think of it as your plan to test each profession and critically evaluate your experience in each environment. The short list is there only so you can decide which specialties to place in the key positions.

The most important thing to keep in mind as you plan your clinical years is that your performance in third year is arguably the single most important component of your residency application. It is more important than both of the first two years *combined*. While it is certainly a benefit to have done well in any pre-clinical course, the third year is the time to shine. This is particularly important for the clerkship in your field of choice. For applicants interested in emergency medicine (EM), the internal medicine and surgery clerkship evaluations tend to be the most important, although a solid performance across the board is most desirable. Keep all of this in mind when planning your third year. For example, do not do medicine and surgery clerkships back to back, if you can help it. Pace yourself, as you plan the sequence of key rotations and the timing of any other important events and commitments in your personal and professional life.

Each medical school has a slightly different setup, but the core third year rotations are essentially the same everywhere. Since you are reading this, it is clear that EM is on your short list and that you likely have a remarkable personality. Since EM is not a part of the standard third year curriculum at most institutions, the bad news is that you will not typically get a chance to evaluate the specialty until the fourth year (unless you have been actively involved on your own before this point). The good news, however, is that the order of your third year can be devoted to the other specialties on your short list. Even if you are sure EM is your calling, this is the time to consider other specialties.

You should now have a short list of one or two specialties from your third year. You may have a tie, in which case you try to work out a schedule where neither option suffers too much at the expense of the other. Place the specialties that are the highest on your list in the second or third quarter (or equivalent). This allows you to "get your feet wet" and exposes you to any non-EM specialty of interest to you before springtime, when you will need to set up your fourth year schedule. That also gives you some time to get to know the people who will be writing your letters of recommendation. If you get to know them early on, then you have the opportunity to continue the relationship

throughout the year. This does not mean that people get the best grades in the second or third quarters. The residents and attendings, who evaluate your performance, know what to expect at different stages in your training, and they will expect more from you as the year goes on. There is also the matter of competition. You are usually judged in contrast to your peer group, and people who are taking a rotation in the first and last quarter of the year are often less likely to be interested in that specialty. Sometimes, therefore, it can be easier to shine in the “off” quarters.

You should also consider placing a broad-based specialty first on your schedule. As an example, if you begin the year with the internal medicine rotation, you will see a wide range of illness and get a solid workout of your pre-clinical knowledge base. You will also get a feel for whether you enjoy practicing medicine that is broad. This can be considered ideal for a student who has EM at the top of his/her short list because EM is itself so broad-based. On the other hand, placing medicine at the end of the year has advantages also in that you will have more recently reviewed the material as you approach your EM rotation at the beginning of your fourth year.

Lastly, you may want to have a less challenging rotation at the end of the third year. This will allow you to be relatively well-rested physically and mentally for the start of your fourth year so you can shine in EM. The beginning of your fourth year will be the single most important two to three months of medical school in terms of your future.

Keep in mind that there are many excellent ways to set up your third year and that you will not be irreversibly disadvantaged if you decide to go into a specialty that you schedule at the beginning or end of the year. The key is to approach each specialty, to the best degree possible, with an attitude that “this could be the one.” By doing this, you will not only have an open mind with which to judge specialties, but your positive attitude will pay off in what you learn and in your resulting evaluations. In addition, some specialties tend to show favoritism to students who are seriously considering their specialty. Of course, this is not fair. However, this is the way it is sometimes. Do not misrepresent your feelings: simply “consider seriously” every specialty when you engage its team for a scheduled clerkship.

## PLANNING YOUR FOURTH YEAR

With the 3<sup>rd</sup> year under your belt, you are now a “senior” student and the whole world changes for the better. Much remains for you to accomplish and to decide. The odds are now high that you will no longer be the first one on the team to get “pimped” on rounds. That being said, you must now kick yourself into high gear NOW if you are still considering a career in EM. You need to make a decision about your specialty by September at the latest and that only



leaves three months. It would be a very good idea to delay taking any vacation until after September unless you are positive that EM is right for you. Other important considerations for planning the fourth year include Step 2 of the National Boards, planning when you will sit for it, and selecting required sub-internships/clerkships, electives and adequate time for interviews.

The planning of your first two to three months of your fourth year is straightforward if you are interested in EM. Most applicants should plan on doing one to two months of EM in the first few months of the year. Many schools have a required EM rotation in the fourth year. This is great, but if the EM program at your school is not affiliated with a residency program, you may not get the experience you need or a letter of recommendation from a recognized EM faculty member. If you are fortunate enough to be attending a school with a strong EM residency program, you may be able to do a single month of EM and dedicate the other months to electives that will strengthen your clinical skills. If this is not the case, however, you should sign up for an away elective at an EM program that is highly regarded and busy. Either way, you may want to strongly consider an "audition" elective for sometime in the fall if there is a program in which you are strongly interested. It is a great chance to see first hand if you like the program. The program will also certainly remember you when they make their rank list.

By September you should have made your decision regarding which specialty you want to pursue, and it is now time to start filling out the application. This is now quite simple thanks to the Electronic Residency Application Service (ERAS). The hardest, and sometimes the most frustrating, part of the application process is making sure all your letter writers get their letters in on time. You should start asking for your letters as early as possible, having all your requests in by the end of August, even if your specialty choice is not finalized! Be sure to ask beforehand if the writer will be able to get the letter finished by a certain date and check the progress as you approach October. The best advice is to get your application COMPLETE (except for the Dean's Letter, which is sent out nationally on November 1) as soon as possible, ideally by early October. Programs begin to review applications and send out offers for interviews in October, and it gets progressively more difficult to secure and schedule interviews as the season progresses.

The period after your EM rotations and before the match is the time to take electives that will prepare you best for the career that you selected at the top of your short list. For EM, these include rotations in critical care, cardiology, ophthalmology, orthopedics, radiology, OB/GYN, pediatrics, and/or any research you may want to pursue. Plan electives during the interview season of mid-November through early February. That will allow you some scheduling



flexibility. As an addition or as an alternative, try scheduling vacation or Board study time for December or January to facilitate the scheduling of your interviews. As the interview season progresses, it becomes harder for a program and you to find a mutually agreeable date. It is best to be as flexible as possible during this period.

You will also need to schedule Step 2 of the National Boards for sometime during the year. Step 2 is not required for your residency application, but it may be helpful in strengthening your application *if* you perform well. Applicants who performed exceptionally well on Step 1 may want to take Step 2 in the springtime to avoid taking the risk of a less remarkable score. Many schools require that you pass the exam before graduation. If this is the case at your medical school and you have any doubt if you will pass, you may want to schedule the exam early so that you would have time for a second attempt if needed.

After you have completed your interviews, it is time to relax! This is the time to take unusual or exotic rotations (for example, international electives or electives in the Indian Health Service) or anything else you may want to pursue. You may never again have the time and opportunity to obtain this type of experience, so take full advantage of it!

## CONCLUSION

1. Be proactive in planning and meeting deadlines. It is better to acknowledge the challenges of being a planner rather than the apparent (yet false) comfort of "going with the flow". You are much more likely to be happy with the result if you have input and control over the process. Be open-minded, and talk to many people regarding potential career options.
2. Third year planning: Have a sense of which third year clerkships are of potential interest for specialty choice, for planning purposes. There are pros and cons to various sequencing options (discussed). Prioritize the ones that make the most sense to you, but maintain flexibility and a positive attitude toward the sequencing and the content of all your clerkships. Your objective should be a high level of performance "across the board" on all rotations, consistent with the broad-based excellence necessary to practice EM.
3. Fourth year planning: The key tasks of senior year planning are the choice and sequencing of clinical clerkships (suggestions listed), the finalization of specialty choice, the timing of taking the United States Medical Licensing Exam (USMLE) part 2, and planning time for residency interviews. In general, the key tasks in the first three months of the senior year are to finalize specialty choice (taking 1-2 EM rotations and/or other key experiences), and to initiate residency applications

through ERAS. Residency interviews are usually conducted in December and January, and it is wise to reserve unscheduled time for this priority.

4. USMLE part 2 can be taken at any time in the senior year; there are pros and cons to the timing of this exam (discussed). The exam is not required as part of your residency application. However, a good score on the exam can be submitted to residencies in support of your application. Regardless of timing, it is sensible to take the exam when there is time for review and fewer distractions from other priorities.

# 17

## The Role of an Emergency Medicine Clerkship: How Many and Where?

### RESIDENT AUTHOR:

Amir Hootan Darvish, MA, MD (Henry Ford Hospital, Detroit)

### FACULTY AUTHOR:

Phyllis A. Vallee, MD, FAAEM (Henry Ford Hospital, Detroit)

### FACULTY EDITOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

## INTRODUCTION

Over the last few years, emergency medicine (EM) has become one of the most desired specialties in medicine.<sup>1</sup> The diversity and acuity of patient care, together with the predictability and flexibility of the work schedule has made the field attractive to many medical students.<sup>2</sup> As application numbers have soared, performance in EM rotations plays a critical role in a successful match. Early preparation and strategic planning are essential in obtaining the desired result.

### HOW MANY EM CLERKSHIPS SHOULD A STUDENT COMPLETE? AND WHEN SHOULD THIS OCCUR DURING THEIR CLINICAL YEARS?

The general consensus is that two clerkships in EM are quite sufficient. This will provide you with an introduction to the basics of EM and some insight into the inner workings of the specialty, including getting adjusted to the shift work and fast pace, multi-tasking, attending to the requests from various support staff, and most importantly, management and proper disposition of patients. Two EM clerkships will also provide you with enough contacts for letters of recommendation.

Some schools require a mandatory EM rotation during the 3<sup>rd</sup> year. This certainly makes things easier as only one 4<sup>th</sup> year elective needs to be arranged. Planning your 4<sup>th</sup> year EM rotation(s) should begin early in your third year. If your school does not offer an EM rotation as part of its required curriculum, you must schedule at least one elective very early in your 4<sup>th</sup> year (July-September is optimal) so that it may offer the maximum impact on the application process. Deciding where to do your EM electives must begin as early as the middle of your 3<sup>rd</sup> year, keeping in mind that most other students who are interested in EM will be planning to do the same. If your school has an EM residency program, a rotation at that site is advisable; if not, an elective at another institution with an EM program that you would consider for residency

is recommended. In most cases, your second EM elective should be at a different site from your first rotation.

### EM ROTATIONS AT AFFILIATED-HOSPITAL

Letters of recommendation from rotations at hospitals with established EM residency programs generally carry the most weight. EM faculty members who are involved in residency selections typically know each other and are entrusted with the responsibility of providing credible recommendations to each other. Therefore, if one is available at your institution, be sure to rotate there. Significant weight is also given to letters from physicians on staff at hospitals closely affiliated with your medical school. These physicians have an ongoing relationship to maintain with the medical school. The expectation is that they will take more time in evaluating the students and may give a more objective evaluation. In addition, they are able to compare students with other ones who have trained and worked in the same clinical environment.

### "AWAY" EM ROTATIONS

The "away" EM rotation (rotation at a hospital with no affiliation with your institution, often with its own residency program) serves as an opportunity to "audition" at a residency program to which you intend to apply. It provides a great occasion to create contacts for residency. It also gives you the chance to compare and contrast strengths as well as weaknesses of various programs. Remember that the program is on display as much as you are! Use this opportunity to learn first hand about the intricacies of the program. Paying close attention to the interaction between residents, faculty and support staff will provide a great window into the culture of that specific department. A successful rotation virtually guarantees an interview and definitely increases your odds for a match with that program.

Locating and securing an outside rotation starts by gathering information about specific hospitals and programs. The best resources are senior classmates who have already gone through the process. They can provide honest and objective insights on which hospitals provide the optimum learning experience. Graduates who have gone on to EM residencies can also provide a wealth of information on their own programs. Your medical school should have a list of all the graduates and hospitals where they have matched. Finally, EM faculty at your school can give you insight into the programs where they trained.

EM web sites such [www.saem.org](http://www.saem.org), [www.aaem.org](http://www.aaem.org), [www.emstudent.org](http://www.emstudent.org) and [www.emra.org](http://www.emra.org) all have dedicated medical student sections. The Society for Academic Emergency Medicine (SAEM) Website has a medical student rotation information guide, which is arranged according to state. Contact names, prerequisites, and information about the hospital setting of each rotation are

available. It is definitely worth spending some time reading through the site. However, be aware that the site is not necessarily up-to-date.

## LOGISTICS FOR AN OUTSIDE ROTATION

Think ahead! The best way to get a sense of your clerkship years is to create an academic year calendar and fill in all your exams and required rotations. What is left is the time during which you can plan your most important electives. The next step is to inquire whether your medical school allows you to do rotations at outside hospitals. Most likely, the administration will have a list of conditions that have to be met.

## WITH YOUR LIST OF CONDITIONS IN HAND, HOW DO YOU ORGANIZE A ROTATION AT AN OUTSIDE HOSPITAL?

Start by contacting the Graduate Medical Education (GME) Office of the hospital in which you are interested and inquire if there are any available rotations in EM. If so, they will send you the appropriate paper work. If not, yet you are definitely interested in doing a rotation at this particular hospital, then contact the EM department secretary directly and verify the name, phone and e-mail of the medical student coordinator. Contacting the coordinator by e-mail probably is your best bet. He or she will probably be very difficult to contact by phone. In your e-mail, introduce yourself including your name, where you attend school, and your expected year of graduation. State that you are interested in doing a residency in EM and that you would like the opportunity to learn more about their EM department. Include the months during which you are available to do a rotation and inquire if there are any openings for those months. End your e-mail message by giving your phone number, address and e-mail. If you get no response after two weeks, e-mail a second time. If you receive no response after that, call the secretary again. Another option is to ask your EM faculty advisor to e-mail the clerkship coordinator or program director if you continue to receive no response. Assuming that your advisor will agree to do this, such a contact can sometimes provide you with the extra push that you may need, if you are particularly interested in one program and cannot secure the elective clerkship on your own. It may also help in a situation where you are placed on a waiting list at the institution you are strongly interested in. Your faculty advisor may be able to carry the message across and to support you as an exceptional candidate, capturing the attention of the other program to accommodate your request through special consideration.

If you receive permission from the medical student coordinator to do a rotation in the department, call their GME Office to arrange the necessary paperwork. The GME Office should also be able to assist you in arranging housing,

meal coupons and parking, if available. Note that this process is institution-dependent. In some institutions, students need to complete this application process first, which is then reviewed and possibly approved or rejected by the clerkship director. A significant number of programs require transcripts, United States Medical Licensing Examination (USMLE™) part I scores and/or a letter of recommendation to be considered for an EM elective clerkship. Institutional requirements vary and may include predefined strict enrollment periods, medical and malpractice coverage, affiliation agreements and/or an application fee.

### TIPS ON A SUCCESSFUL ROTATION

Remember the adage, "First impressions count the most." Be punctual and arrive on time or just a little early for your shifts. You will likely be paired with a senior resident who will assign you patients with educational value. Alternatively, some departments may prefer to pair you directly with an attending physician. Establish yourself as intelligent, efficient, qualified and courteous. Be thorough in your history taking, meticulous in your physical exams, all-encompassing in your differential diagnoses, and precise and definitive in your disposition and plan for each patient. Be open to both criticism and praise and never be afraid to ask for help when needed. Nothing can ruin your clerkship experience faster than doing something inappropriate because you were overconfident or afraid to ask for help! Be assertive and show enthusiasm for learning. Follow up on some of your interesting patients and share the results with the appropriate resident and/or staff. Your efforts and determination will make your clerkship a successful learning experience and will leave a positive impression on the minds of your evaluators and potential future attending staff. For additional details on "how to be a star" during your EM clerkship, students should read chapter 18 in this textbook.

### References:

- 1) Rowley BD, Baldwin DC Jr, McGuire MB. Selected characteristics of graduate medical education in the United States. *JAMA*. 1991;266:933-943.
- 2) Kazzi AA, Langdorf MI, Ghadishah D, Handly N. Motivations for a career in emergency medicine: a profile of the 1996 US applicant pool. *Can J Emerg Med*. 2001;3:99-104.

## 18

Your Emergency  
Medicine Clerkship:  
How to be a Star!

## RESIDENT AUTHOR:

Michael E. Winters, MD (University of Maryland)

## FACULTY AUTHOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

## FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Louisiana State University, New Orleans)

## INTRODUCTION

Over the past several years the specialty of emergency medicine (EM) has grown tremendously. Older and smaller emergency departments (EDs) are now being replaced by larger and more innovative departments that contain dedicated chest pain evaluation centers and/or 24 hour observation areas. In addition, there is also increasing emphasis placed on obtaining qualified physicians to staff the department, i.e. graduates of accredited EM residency programs. No longer can one simply take the EM Board Certification Examination and begin working as an ED physician.

As interest in EM continues to increase, so does the number of applications to EM residency programs. With this increase in applications comes an increase in competition for a limited number of residency positions. In order to select between the numerous qualified applicants, programs are placing increased emphasis on performance in fourth year EM clerkships. Therefore, in order to do well on the Match and be recruited by the most competitive programs, applicants *must* do very well during their EM clerkship(s).

As an aspiring fourth year medical student you have not had much experience in the ED, with your exposure limited to admitting patients during your various third-year clerkships. Despite this lack of exposure, you are expected to become oriented and to excel, in such an unfamiliar environment, and in only a few short weeks. To further complicate matters, there is very little published material to guide you in your quest to impress the residents and faculty of the ED. This chapter is intended to prepare you to succeed in your EM clerkship and, in the end, to assist you in your ultimate goal of matching in an EM residency program.

## BEFORE YOU START

Success is usually a result of insightful planning and diligent preparation. Due to the variety of patients, much of what you learned during your third year can be applied in the ED. Your goal is to build on your knowledge base and make

a favorable impression. With that in mind, there are several general suggestions and/or guidelines you should consider prior to arriving for your first shift.

1. *Work hard.* Excellent work ethic is one of the most important qualities of the "star" medical student. Students that are given outstanding evaluations are those that are busy taking care of patients from the beginning to the end of their shift. Always be eager to pick up a new chart, assist a resident with a procedure, or simply provide a drink to a thirsty patient. Demonstrate that you are enthusiastic about being in the ED. In addition to working hard individually, you should also show that you work well with others. Patient care in the ED is very much a team effort. From the attending to the nursing extender, all members of the team are vital to maintain quality patient care in the ED. Be willing to help other members of this team whenever time allows.
2. *Be punctual.* Always plan to arrive approximately fifteen minutes before the start of your shift. This will give you the opportunity to secure your personal belongings, gather your supplies, survey how busy the ED is that day, and introduce yourself to the incoming residents and nursing staff. Furthermore, arriving early will also allow you to follow up on patients you admitted during previous shifts. Was your admitting diagnosis correct? Were there any labs or diagnostic procedures that should have been performed in the ED? Were there any additional diagnoses you did not consider in your differential? Make sure that at the start of your shift you are ready to pick up a new chart.
3. *Expect to stay late.* You should not only arrive early, but you should also plan on staying after your shift has ended. Eagerly watching the clock for the end of the shift does not make a good impression. Do not sign out tasks that you can easily accomplish with just a little extra effort. Ensure that all your patients are stable, all current labs and x-rays have been reviewed, vital signs and repeat physical examinations are clearly documented, and an appropriate patient disposition has been initiated.
4. *Always dress professionally.* Patient care should not be conducted in a t-shirt and/or jeans. Most departments will accept shirt and tie, formal wear, or their own institutional hospital scrub. Many of them will have hospital or departmental policies defining the expected attire for students, residents and faculty. Many will request that students wear a white lab coat. All of them will expect you to display at all times your picture identification badge. Contact the clerkship coordinator in the emergency department prior to your first day to determine your expected attire.
5. *Keep supplies at hand.* Besides your lab coat and stethoscope, there are



several additional items that will be useful during your month in the ED. One of the more important items you will want to have is eye protection. A set of goggles/glasses will be invaluable during those hectic resuscitations when you will need to secure an airway, perform closed chest compressions, or establish central venous access. You do not want to be remembered as that medical student who failed to use Universal Precautions and ended up with a body-fluid exposure. Aside from eye protection, you will want to have a pair of trauma shears. Recall that an important part of the primary survey of trauma patients is to obtain proper exposure of the patient. Your attending will be impressed as you remove the clothes of an unresponsive patient to look for diagnostic clues. Although most EDs are well equipped with light sources, you should always have a penlight. For those patients that are located in the hallway, a handheld ophthalmoscope is crucial. For patients with neurologic complaints, a reflex hammer and tuning fork are essential in performing a complete neurological exam. A set of ECG calipers is helpful in evaluating dysrhythmias.

6. *Use your "down time" wisely.* Every ED will have periods when patient volume is low. It is during these times when you should maximize your learning. Inquire about other patients in the ED that may have interesting physical findings. Offer to assist residents with placing peripheral or central venous lines, drawing labs, or escorting patients to and from radiology. Have the resident or attending discuss atypical presentations of common illnesses, review abnormal labs, or view interesting x-rays. Do not use this extra time to check your email, surf the Internet, or thumb through the daily sports section. This will reflect poorly upon your attitude and enthusiasm as an ED care-provider and member of the team.
7. *Keep some useful pocket references.* Every ED will have emergency medicine textbooks located somewhere in the department. These are wonderful sources of comprehensive emergency medicine information. Most often, however, you will find the information too comprehensive to read when you are simultaneously managing several patients. Thus, there are several pocket references that may prove invaluable during your weeks in the ED. For a quick reference of medications and their dosages you should have the latest version of the *Pocket Pharmacopoeia*. The *Sanford's Guide to Antimicrobial Therapy* is essential when confronted with infectious disease questions, such as the most likely organisms, appropriate antibiotic coverage, and dosing adjustments for renal impairment. In addition, the *House Officer Series Emergency Medicine*

handbook is an excellent reference guide for EM topics. For each topic, this handbook specifies questions to ask in the history, pertinent positive and negative physical exam findings, key diagnostic tests, ED treatment, and disposition.

8. *Orient yourself to the ED.* Familiarize yourself with the department before your first shift. Most programs will offer an orientation session to discuss specific departmental policies. Locate computer terminals for accessing laboratory results. Find the clean supplies room. Ask a resident where reference textbooks are located for those times when you need a bit more information than what is provided in your handbooks.
9. *Know your limits.* As a fourth year student you are not expected to have the fund of knowledge or procedural competency of an EM resident. Ask for help or guidance when you are not sure what to do. Do not jeopardize the health of a patient by providing misleading information or performing a procedure incorrectly. Never perform a procedure by yourself if you feel uncomfortable with it. Ask for help or supervision!

## NOW IT IS TIME TO SHINE

Now that you have diligently prepared yourself, you are ready to begin your shifts in the ED. As discussed above, plan to arrive early. Secure your belongings, gather your needed materials, introduce yourself to the attending and residents, and determine to whom you will be presenting cases. Also try to learn the names of the nurses with whom you will be working. Before sign-in rounds begin, ask your senior resident or attending about expectations for patient load. Pay close attention during sign-in rounds to learn about interesting patient presentations and diagnoses. After rounds have concluded pick up your first chart of the day.

As you peruse the chart pay particular attention to the nursing triage note. First, note the patient's chief complaint. Take a brief moment to formulate a broad differential diagnosis based on what it is. This will help direct your history and physical examination. Second, review the patient's vital signs *before* going to see the patient. Alert the senior resident or attending about any patient with unstable vital signs, alterations of levels of consciousness, or chief complaints of chest pain and/or shortness of breath. Include severe pain and low oxygen oxymetry as unstable vital signs. These patients should be evaluated very early, and simultaneously with the resident or attending, sometimes minutes after they arrive to the ED bed. Now that you have gathered some important preliminary data from the triage note, meet your patient.

Always begin by introducing yourself and shaking hands. A key aspect to emergency medicine is your initial observations. Does the patient appear to be

in distress? Are they diaphoretic, clammy, or writhing in pain? Are they sitting on the edge of the bed unable to find a comfortable position? Are they lethargic or difficult to arouse? These observations will tell you if you need to act quickly or if you have a few minutes to obtain important historical information. If the patient is not in any acute distress obtain a *focused* history and perform a complete physical exam as it pertains to the chief complaint. Remember that any patient with abdominal complaints should have a rectal examination. Departmental policies vary regarding the presence of chaperones during the examination, but it is prudent to always have a chaperone present during rectal, breast, and genital examinations. Your attending or resident will usually want to be present during pelvic examinations, so it is advisable to defer this portion of the examination until they are available. As you perform your initial evaluation, you should be simultaneously thinking about and revising your differential diagnosis.

Prior to presenting the case to your attending or resident, take a moment to get organized. Since the ED is a busy place, you must present a focused history and physical. Do not get lost in extraneous details that only serve to distract the listener. At the conclusion of your presentation you will be expected to discuss your differential diagnosis. If you are uncertain or unclear, use your pocket references as a guide. Outstanding students will also provide a treatment plan in order to deduce the correct diagnosis. Be prepared to explain why you would like a particular laboratory or radiographic study. "Because that's what we always get" is not an acceptable reason. After you have finished your presentation, the attending or resident will review and further refine your differential and together you will develop a treatment plan.

Since you are the primary care-provider for your patient, it is your responsibility to ensure that the plan is accomplished, and that its implementation is done smoothly. Ask, check, and recheck if it was done, but do not pester. If your patient needs intravenous (IV) access, make sure one is promptly started. If you know how to start one, consider placing it yourself. However, coordinate this with the patient's primary nurse. She may need you to draw blood while placing the IV line. If they need laboratory studies, draw them or collect the specimens. Label them properly. If they need x-rays and they do not need cardiac monitoring, escort them to and from radiology. If your patient requires a subspecialty consultation, call the consultant and discuss the case with him/her. Do not leave the ED without notifying your supervising emergency physician (EP) and securing a proper sign-out. This should include the end of your shift, as well as any time you may need to step to the cafeteria or to the radiology suite. Do not forget that your patients also require serial examinations, especially if they have chest or abdominal pain. If you have ordered an

intervention, re-evaluate your patient after that particular intervention. Did they respond to your treatment? If not, do you need to consider another diagnosis? Make sure your documentation accurately reflects the patient's ED course.

Always make sure the chart reflects the history and physical exam findings as identified or confirmed by your resident or attending. If they say the abdomen is not acute, or that there was no true rebound tenderness, your chart should reflect their findings. If your resident or attending identifies the chest pain became worse 2 hours before arrival while your chart stated the pain began 3 days ago, make sure your charting reflects what they elucidated. After all you are there learning and probably encountering your first acute abdomen. This is your first opportunity to be the first provider who is asked to describe and define specific findings in the physical exam.

It may be most optimal to leave the documentation on the chart until after you have presented, examined and discussed the case with the resident and attending. This will provide an opportunity for more organized and accurate charting and no discordant information on the official medical records. It also will reduce the risk that a patient with significant pain or distress, or a potential immediately life-threatening emergency ends up being delayed the extra time you may take to write a full history and exam.

Finally, you will need to decide whether your patient can be safely discharged or whether the patient requires further inpatient evaluation. Ultimately, the decision to consult, admit, or discharge your patient is made by the attending physician. Be sure to review the indications for admission with the attending and/or senior resident.

## NON-CLINICAL TIME

Most electives in emergency medicine will have designated lecture time aside from your clinical responsibilities. Your attendance at these lectures and residency conferences should be considered mandatory. It is here that you will discuss the "bread and butter" EM topics. The approach to the patient with suspected myocardial infarction, pulmonary embolism, and aortic dissection are just a few examples of topics usually presented.

Stellar students do not only attend every scheduled conference and the journal club, they also demonstrate continued interest by reading about their patients' complaints or diseases. After each shift, pick a topic that you encountered during that day and read about it in a reference book. If there are questions you have even after reading, ask your attending or senior residents about them at your next shift. This will also demonstrate your interest in EM.

## EVALUATIONS

Throughout your clerkship numerous attendings and residents will evaluate your ability to be an EM physician. Some of the more important aspects that are evaluated are:

- Your work ethic, interest, and enthusiasm for EM
- Your ability to rapidly apply new learning
- Your ability to perform a focused history and physical
- Your ability to critically evaluate abnormal exam findings
- Your ability to evaluate abnormal laboratory data
- Your ability to create a complete differential diagnosis
- Your ability to develop an appropriate treatment plan
- Your ability to work well with others (i.e., nurses, techs, consultants, etc.)
- Your ability to demonstrate empathy and compassion

Ask for feedback at the end of each shift. Have your attending or resident review things you did well, as well as things you still need to work on. Do not wait until the last few days of your rotation to ask for feedback. You do not want to learn about repetitive mistakes that could have been easily corrected earlier had you inquired.

## FINAL THOUGHTS

As the popularity of emergency medicine continues to rise, so do the number of applications to EM residency programs. With this increase in applications comes an increase in competition for available positions. Although not required for graduation from medical school, EM clerkships are an integral component to the application process. Until now, there has been little published literature to assist students in their EM clerkship. It is our hope that after reading this chapter, you will possess the essentials needed to be a star during your EM clerkship!

## References:

- 1) Lubavin B, Phelps M. Pearls of wisdom for your emergency medicine rotation. *J Emerg Med.* 2001;20:211-212.
- 2) Mahadevan S, Garmel GM. The outstanding medical student in emergency medicine. *Acad Emerg Med.* 2001;8:402-403.



## 19

Research and  
Scholarly Projects

## RESIDENT AUTHOR:

Kyran Colbry, MD (Oregon Health Sciences University / University of Connecticut)

## FACULTY AUTHOR:

Jerris R. Hedges, MD, MS, FAAEM (Oregon Health & Sciences University, Portland)

## FACULTY EDITOR:

David A. Wald, DO, FAAEM, FACOEP (Temple University, Philadelphia)

SHOULD A STUDENT DO RESEARCH OR OTHER FORMS OF  
SCHOLARLY PROJECTS DURING MEDICAL SCHOOL?

The answer must be different for every student. We hope that this chapter will serve to guide emergency medicine (EM) applicants and residents when they contemplate, or are invited or asked to complete a scholarly project. As a medical student, I undertook research early on to become more involved in academic EM, to meet the faculty and residents, and to further advance the competitiveness of my residency application. Throughout medical school I worked on two different research projects. My involvement led to a publication in Academic Emergency Medicine, and provided me the opportunity to present at three EM conferences. These were valuable learning experiences which provided me considerable insight into the academic and community practice settings of EM and helped me match in the EM residency program that I wanted.

It is essential for medical students who are considering a career in EM to remember that there are many forms of medical student scholarship other than a formal research project. While formal research and the publication of a manuscript remains highly regarded as the most valuable form of academic involvement and skill, scholarly projects are important contributions that will often provide much of the same value and exposure.

## IS RESEARCH FOR EVERYONE?

Not necessarily as a career focus, but everyone can benefit from assisting with a research project. At the very least you will develop respect for people who do research, even "simple" retrospective reviews. You also will meet faculty and residents in the emergency department (ED), go to a conference or two and maybe get published. The benefits to an applicant can be great. It will definitely give you more to cover in your resident applicant interviews than the stock questions: "Why did you choose our program?" and "Tell me about yourself?" Participating in research shows that you are interested in and commit-

ted to EM. Your efforts will provide the Principal Investigator the opportunity to write you a glowing letter. Clearly someone who has met regularly with you and observed your commitment to a project and thought processes will have much to say on your behalf.

Your discussions with the Principal Investigator and research team will provide practical insights into the development and initiation of a research project and the resultant publication process. These discussions will also help illuminate the issues facing EM. If you present the project you will learn valuable presentation skills and have the opportunity to attend an educational conference and meet other EM faculty, program directors and other leaders in the academic EM community.

### WHAT ARE THE DOWNSIDES OF RESEARCH DURING MEDICAL SCHOOL?

Research is time-consuming, and requires hard work. The majority of studies may take a year or longer to complete, and your involvement may mean taking time away from your studies or sacrificing your last free summer off. As a medical student, you may have minimal involvement in a particular study (data gathering or data entry) and you may not receive publication credit if multiple students are involved. Poorly designed or executed studies may not get completed or published. For well designed and implemented studies, the publication of a manuscript in a journal may be delayed for years. You will need to decide if the effort is worth the often delayed gratification.

### DO YOU NEED TO DO RESEARCH OR A SCHOLARLY PROJECT TO GET INTO AN EM PROGRAM?

The answer is "No." Most students going into EM have not done research - at least not during medical school. While research experience during your undergraduate years is a valuable demonstration that you understand the scientific method, ongoing research involvement during medical school shows compatibility and potential for continuing interest in academic medicine. Residency selection committees recognize that significant research or scholarly activity during medical school can be associated with an applicant who will go above and beyond the residency's clinical rotations to learn about EM. Although those who enter medical school with an advanced degree may be adequately grounded in research methodology, participation in research during medical school suggests a higher level of interest in medical scholarship. It can only serve as an additional advantage for the student applicant, especially if the student research is relevant to the practice of EM.



### WHAT IF YOU HAVE STELLAR GRADES AND ARE AN "AOA" (ALPHA OMEGA ALPHA) MEMBER?

Congratulations. You are in an elite position. However, if you want a competitive EM program, chances are good that those applicants competing with you also will have stellar grades and be AOA. Research and other scholarly activity may help distinguish you as an applicant. That is not to say that either is a golden ticket. Not all programs place the same emphasis on research and scholarly projects during medical school.

### WHAT KIND OF RESEARCH SHOULD YOU DO?

Unless you have a strong basic science background, the best option may be to do clinically oriented research. Generally, you can relate to the project more easily and it will help you to understand current related issues in EM. Pick a topic that interests you and, if possible, a research mentor who you would like to work with.

### ARE THERE OTHER SCHOLARSHIP OPTIONS, IF I DO NOT WANT TO DO RESEARCH?

Yes! Students can contribute to other scholarship such as collective review papers, textbook or monograph chapters, curriculum development, and newsletter articles. In general, the acquisition of a faculty mentor is as important for these projects as for a research project. If you had a significant contribution, these projects can carry as much weight as participating in a research project. Given the widespread interest in evidence-based medicine, structured literature reviews (which address specific clinical dilemmas using structured literature searches and rigorous evaluation of published data) represent opportunities for students to actively participate in the creation (i.e., knowledge synthesis) of scholarship.

In the rest of this chapter, in order to guide you most effectively, we will mainly focus on research and discuss other forms of scholarly activity as we go along.

### WHO SHOULD YOU WORK WITH?

Ask the students in the classes ahead of you. Also, consider reviewing the web page of the EM residency affiliated with your medical school. Information about the faculty is often listed or described on the web page of individual institutions by interest. Generally, each program will have a point person who links students with faculty members. This may be the director of research, the medical student coordinator, the residency director, the chair, or the EM interest group advisor. What if your school does not have an EM residency program? Perhaps there is another school in town with an EM training program where you can work. If not, consider research or a project in another field

that is closely related such as trauma surgery. Or perhaps the doctors in your institution's ED are doing research even though they do not have a residency program. Programs also exist for students to travel to other institutions over the summer to participate in research projects. The Society for Academic Emergency Medicine (SAEM) and the EM Foundation (EMF) co-sponsor a 3-month medical student research award (<http://www.saem.org/awards/emfcall.htm>).

### HOW SHOULD YOU GET STARTED?

With rare exceptions, it is best NOT to undertake your own study or your own scholarly project. For consistency and guidance, it is desirable to work with a faculty member who has already initiated a project or has an idea that he/she wants to develop. First you should identify that person in the ED. He or she will most often help you get involved in an active or upcoming research or scholarly project. This is the most common scenario, where you (the medical student) have an interest in clinical research or in participating in a scholarly activity. You likely do not have the experience, the contacts or the direction to start or execute a project. Doing your own study is extremely time-consuming. Face it: it is unlikely that others will commit so much of their time and resources to your own project. Keep in mind that doing your own research study requires that you come up with a hypothesis, design the study, get it approved by the institutional review board, get funding, get access to the patients or records, and analyze the data. Then you must choose and review the relevant literature, write up the manuscript and deal with a significant number of demanding and time-consuming revisions until you get it accepted and published. Few students have the time, experience and contacts to be responsible for all phases of a research project. The same logic applies to scholarly projects other than research studies. Working as a team member on a faculty member's research or project helps you bypass the initial steps and gives you time to work with the responsible faculty member. It also is wise to start a project in the first or second year of medical school so that your efforts will not conflict with the clinical years. Remember that residency directors put a disproportionate weight on your 3rd year clinical rotation grades. Such an approach also maximizes the likelihood that you will actually have a tangible project (e.g., abstract, meeting presentation, and/or publication) by the time you apply for a residency position during the 4th year.

### HOW TO IDENTIFY SOUND RESEARCH METHODOLOGY? (AN OVERVIEW)

A student should probably be mentored closely during development of a research project. However, there are a number of references that can provide students guidance and reading material. One excellent primer that we recom-

mend is entitled "Designing Clinical Research: An Epidemiologic Approach" by Stephen B. Hulley & Stephen R. Cummings.<sup>1</sup>

#### HOW ABOUT DOING RESEARCH THAT IS UNRELATED TO EM?

Why would you want to do that? The more your work is about EM, the more favorable an influence it will have on your quest for an EM residency position. Certainly, you can receive intellectual stimulation and make a contribution to science by addressing issues outside of EM. You may even find excellent research mentors at your institution who wish to help you develop research skills in a non-EM field. However, the more compatible the research with your chosen clinical specialty, the more likely you are to gain from the experience. Choose your project carefully. Should you enter EM late after doing research in another field, you may elect to contribute to another form of scholarship in EM rather than initiate a second research project.

#### WHAT IS AUTHORSHIP AND SHOULD YOU INSIST ON HAVING IT?

Authorship for a paper has several criteria. According to the International Committee of Medical Journal Editors, each author should have participated sufficiently in the work to take public responsibility for the content. That is, each author must make substantial contributions to the conception or design, or analysis and interpretation. Each author must contribute to drafting the article or revising it critically for important intellectual content. Each author must have reviewed and approved the final version of the article to be published. All three of these latter criteria must be met. Clearly there are rewards to being an author, but there is concurrent responsibility. Simply collecting data for a project does not warrant authorship. You most likely will not be first author unless you put most of the effort into the project and wrote the manuscript. However, final say on authorship belongs to the Principal Investigator.

The same logic applies to authorship of chapters and review papers. Many publishers and chief editors will not accept a student first author and will require faculty authors to take the leads. They need it to add legitimacy and credibility to the content and to ensure a reliable process when they attempt to publish future editions.

There is a fair body of literature here. The bibliography section of this chapter provides a number of valuable references for students who wish to explore this matter further.<sup>2-7</sup>

#### ARE STUDENT RESEARCH AND SCHOLARLY PROJECTS STILL VALUABLE, IF YOU ARE NOT AN AUTHOR?

Yes, but another form of recognition should be achieved. Recognition as a

contributor may be simply an acknowledgment note on an article or chapter. This recognition identifies your contributions and validates your efforts. If the project has yet to be published, you should ask for a letter from the Principal Investigator or faculty mentor that outlines your contributions to the project. If you have been involved in a "Research Associate" program as a volunteer, whether in the premedical years or as a medical student, such a letter may be your only validation of participation in the research. Regardless, you have gained knowledge about the performance of a research study and hopefully now appreciate the rationale for the study you supported. You can always discuss your involvement in such projects with those interviewing you for a residency position. Just be certain not to claim to be an author when your role actually may have been more in the background. The appearance of falsehoods on curriculum vitae or other application materials is the "kiss of death" during the application process.

#### WHERE SHOULD YOU PRESENT YOUR POSTER OR PAPER?

There are many scientific meetings. One good site is a SAEM regional or (May) national conference (see [www.saem.org](http://www.saem.org)). Medical students can also present at the American Academy of Emergency Medicine (AAEM) Resident Research Forum (March), the American College of Emergency Physicians (ACEP) Research Forum (October) or other national, regional or international meetings. Your faculty mentor can guide you to time such an opportunity in a way that would help your application process. At these meetings you will find many people involved in residency programs, including residency directors. These meetings are good forums to learn about different residency programs and to learn about the latest scientific developments in the field. At most schools, the Dean's office will have travel funds for students to present at such meetings.

It is important to note that in 2001 the American Academy of Emergency Medicine Resident Section (AAEM/RES) established a "Medical Student Forum" section in the *Journal of Emergency Medicine* (JEM), the official AAEM academic journal.<sup>8</sup> The objective of this section of JEM is to encourage and foster various forms of medical student scholarly activity. This section is dedicated to medical student driven scholarly projects, and requires first authorship to be given to medical students. Additional information can be obtained through ([www.aem.org](http://www.aem.org), [www.elsevier.com/inca/publications/store/5/2/5/4/7/3/index.htm](http://www.elsevier.com/inca/publications/store/5/2/5/4/7/3/index.htm)), and ([www.emstudent.org](http://www.emstudent.org)).

#### HOW TO TURN YOUR ABSTRACT INTO A MANUSCRIPT?

This topic is more problematic. As one designs a research project, the end goal should be the manuscript and not the abstract. Indeed, the study design

should be prepared as if one were writing the study methods for the final journal article. The justification for the project should be written as a draft of the manuscript introduction and discussion section. The abstract should be a by-product of the manuscript. That is, the distillation of the introduction, methods, results, discussion, and conclusions becomes the abstract for the manuscript that is presented at scientific meetings in an expanded format or published with the article in its final format. The successful investigator writes the manuscript first and the abstract later. This is not an absolute rule; indeed, it is often broken due to the rush to complete an abstract for submission at a national meeting. If one does complete the abstract first, rather than try and expand the abstract into a manuscript, the investigator should go back to the designed study and write the manuscript independent of what may have been published previously as an abstract. Again, most of the manuscript should have been written as the study was originally designed and before any data were collected.

#### WHY DO ESTABLISHED RESEARCHERS AND ACADEMICIANS SPEND TIME WORKING ON SCHOLARLY PROJECTS WITH STUDENTS?

Most do it because they love to teach. In exchange for labor (often volunteered by the student), they have the opportunity to ignite the spark of discovery in a future emergency physician (EP).

#### WOULD I DO RESEARCH OR WORK ON A SCHOLARLY PROJECT DURING MEDICAL SCHOOL AGAIN - KNOWING WHAT I KNOW NOW?

I am biased toward doing research, in part because I did research. Participating will help you strengthen your residency application, energize your interviews and provide a foundation for subsequent discovery. All EM residencies require a completed scholarly project from their residents to meet Residency Review Committee (RRC) requirements. Initiating a line of investigation as a medical student puts you a step ahead towards meeting the residency requirement. Note that most residency programs would expect a new project to meet your residency requirement. Your experience will aid you when subsequently reading and critically reviewing research literature, review papers and textbook chapters. As a medical student, participating in research or in a scholarly project is an excellent way to start on your career path in EM.

### References:

- 1) Hulley SB, Cummings SR. *Designing clinical research: An epidemiologic approach*. Philadelphia: Lippincott, Williams & Wilkins. 2002.
- 2) Davidoff F. Report to the Council of Biology Editors from the Task Force on Authorship. Who's the author? Problems with biomedical authorship, and some possible solutions. *Science Editor*. 2000;23:111-119.
- 3) Paneth N. Separating authorship responsibility and authorship credit: A proposal for biomedical journals. *Am J Publ Hlth*. 1998;88:824-6.
- 4) Lundberg GD, Glass RM. What does authorship mean in a peer-reviewed medical journal? *JAMA*. 1996;276:75.
- 5) Rennie D, Yank V, Emanuel L. When authorship fails: A proposal to make contributors accountable. *JAMA*. 1997;278:579-585.
- 6) Rennie D, Flanagan A, Yank V. The contributions of authors. *JAMA*. 2000;284:89-91.
- 7) Shapiro DW, Wenger NS, Shapiro MF. The contributions of authors to multi-authored biomedical research papers. *JAMA*. 1994;271:438-471.
- 8) <http://www.elsevier.com/inca/publications/store/5/2/5/4/7/3/index.htm>

# 20 MEDICAL STUDENT LEADERSHIP

## RESIDENT AUTHOR:

Scott G. Weiner, MD (Harvard Affiliated Residency at Beth Israel Deaconess)

## FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

## FACULTY EDITOR:

David A. Wald, DO, FAAEM, FACOEP (Temple University, Philadelphia)

## INTRODUCTION

Emergency Physicians (EPs) are, by the nature of their job, leaders. EPs must take the helm of the emergency department (ED), coordinating the care of numerous patients simultaneously, prioritizing their care, allocating available resources, and securing what they need when it is missing. They lead resuscitations and assume the everyday urgent needs of a community they are responsible for when no one else is available or around. They perform hands-on critical procedures and still attend to the administrative tasks that are required by the authorities that delegated such a responsibility and authority to them. Last but not least, they are expected to stay calm under stress, and to radiate confidence to patients and other staff members alike in the middle of chaos.

Such ability to assume responsibility, to multitask, to manage and to lead teams of healthcare professionals by example and under stress, has been recognized in a variety of ways and often outside the ED. You will also find EPs as directors of pre-hospital emergency medical services, leaders of national and regional disaster response teams and systems, and in international health relief. You will even find them governing states, running for state senate, and responsible for astronaut health at NASA. Their particular capacity to lead and to remain flexible and independently resourceful, and their special skill being best trained to deal with the widest spectrum of acute complaints in most settings, makes EPs among the best-rounded physicians in the house of medicine.

## LEADERSHIP ACTIVITY FOR EMERGENCY MEDICINE (EM) CANDIDATES: WHY?

The author Henry Mintzberg once wrote: "Leadership, like swimming, cannot be learned by reading about it." For this reason, it is a great idea for medical students interested in EM to gain leadership experiences. Having the ability to test one's abilities by practicing leadership skills is the perfect way to develop



or enhance those same skills. Getting recognized for one's leadership activity requires outstanding interpersonal skills, team play, commitment and integrity. An established record of leadership activity can be one of the most reliable expressions of stellar diligence, reliability, and work ethic. It would, therefore, make a lot of sense for program directors (PDs) to consider leadership skills a highly sought-after quality in EM residency applicants.

Having an established record of leadership experiences will significantly add to the strength of a candidate's application to an EM residency program. Leadership activity can be manifested and developed by medical students in a large variety of roles and settings. This chapter will focus primarily on avenues and opportunities that are specific to EM students and residency candidates, particularly in various EM organizations.

### EMERGENCY MEDICINE INTEREST GROUPS

With a National Resident Matching Program (NRMP) match rate exceeding 98-99%, EM remains a highly desirable field, in spite of a continuing growth in residency spots that has remained highest for the last 2 decades among all specialties. With over 5% of all US medical school graduates matching in EM, it is reasonable to assume that, year after year, US medical schools count a large number of students interested in EM as a career. Having an Emergency Medicine Interest Group (EMIG) is a great way to learn about the specialty. This is essential to make sure students are carefully prepared for a career that is relatively engaging, one of the highest percentages of US medical school graduates, and to optimize the applicants' chance of matching the first year and in a program that is high on their list and most optimal as a match to their profile. In other words, if your school does not have an EMIG, start one! If it does, then get involved. Volunteer to assist with the planning of events and activities.

This textbook dedicated a whole chapter to the topic of EMIGs. Please refer to Chapter 21 for details on how to start a group or to get involved. To further assist you in this process, here are some common ideas for EMIG meetings that your EMIG could consider:

- **Education:** Ask speakers to discuss how to read EKGs, how to manage acute cardiac syndromes or how to run a medical resuscitation.
- **Practical Workshops:** Hold workshops on suturing, airway management or casting and splinting. If you have a *Med-flight* helicopter program, ask for an orientation.
- **EM Subspecialties and Fellowships:** Ask any sub-specialist or fellowship leader at your school's program to come and give an overview of their niche within the specialty of EM. These include topics such as toxicology, hyperbaric EM, international EM, sports medicine or pe-



diatric EM, for example.

- The Practice of EM: Ask EPs at your school and from the community to discuss the academic vs. community practice of EM.

Even if you are not the president of the group, you can still gain valuable leadership experience. Best of all, you will get to interface with important EPs in your school and community. The fact that they will start earlier to get progressively acquainted with your interests, personality, work ethic and skill level, is an outstanding basis for a personal and (hopefully) outstanding letter of recommendation by known educators in the specialty.

### NATIONAL EMERGENCY MEDICINE ORGANIZATIONS

EM is fortunate to have a large number of specialty organizations that openly welcome student and resident participation. The major organizations that have resident and student sections are the American Academy of Emergency Medicine (AAEM), the Society for Academic Emergency Medicine (SAEM), the Emergency Medicine Residents Association (EMRA) and the American College of Emergency Medicine (ACEP).

### THE AMERICAN ACADEMY OF EMERGENCY MEDICINE: (WWW.AAEM.ORG)

AAEM is a specialty society that emphasizes the importance of board certification in EM and fairness in the workplace. Board certification is attainable only by passing the stringent requirements of the American Board of Emergency Medicine (ABEM), for allopaths, or the American Osteopathic Board of Emergency Medicine (AOBEM), for osteopaths. Since 1989, the only way to become legitimately EM board-certified is by completing an EM residency and passing ABEM or AOBEM's written and oral certification exams. In the workplace and on the legislative front, AAEM monitors and addresses, with transparency, practice issues in EM, standing firmly 1) against unfair clauses, such as lack of due process or restrictive non-compete covenants, and 2) against abusive corporate business practices. Examples of such AAEM positions includes exposing or opposing (in court or through legislation) the sale of contracts to lay entities or hospital corporations, unfair exploitation through excessive management fees, and the greedy theft of the income of future EM practitioners (you). This is a real threat that occurs through the sale of ED exclusive contracts to investors who need then to recuperate the price tag in addition to making the intended maximum profit from your professional fees. AAEM heavily promotes open books, partnership in the workplace and physician-ownership of their ED practice or contract.

AAEM established its Resident and Student Section in 1999. Referred to as the "AAEM Resident Section" or "AAEM/RES," it seeks to educate residents, fellows and students about the full scope and importance of practice and

workforce issues in EM, as well as to promote research and communication. AAEM/RES's message is unique in openly addressing not only the basic and mainstream in EM practice, but also the controversial, abusive and exploitative. Leadership positions for students and residents in AAEM/RES include election to and service as an officer or member of its board of directors. These include a president, one vice-president, a secretary/treasurer, a fellow and a medical student representative, an immediate past-president and four at-large board members.

AAEM strongly supports its resident section, promoting resident and student membership through various free or discounted benefits and resident-focused activities. One most remarkable feature of service in AAEM/RES is that its president holds a voting seat and membership on the main AAEM board of directors. This provides direct valuable input into the deliberation and decision-making that affects the future of EM residents. The residents' perspective on various issues is not only heard; it is counted. All members of the resident board must be residents except for the fellow (who has finished an EM residency) and the medical student (who can be any student interested in EM).

Medical student leadership achievements and activities in AAEM/RES have included the creation of a database of hundreds of students interested in EM, the establishment of a medical student forum in the *Journal of Emergency Medicine*, and the idea and request that motivated us to develop this book.

Nominations for these positions are in the early spring and voting occurs in May. The positions run from July 1 to June 30, and each term lasts one year. The only requirement is membership in AAEM and submission of a candidate's statement.

Students, of course, can also contact AAEM or one of its state chapters to participate in its activities as a medical student representative on a committee or taskforce, in a state chapter, in a school, or in a specific activity. Such opportunities can be identified through the AAEM Newsletter (*Common Sense*), website or periodic e-mail releases to its membership. Examples include the medical student representative on the California AAEM board, the administration of the CAL/AAEM Electronic News Service, and the publishing or marketing editorial student volunteer activity in the *California Journal of Emergency Medicine*.

#### **THE SOCIETY FOR ACADEMIC EMERGENCY MEDICINE: (WWW.SAEM.ORG)**

SAEM was founded in 1988 from the amalgamation of two former EM academic organizations. Its mission is to improve patient care by advancing research and education in EM. SAEM is, therefore, largely comprised of those involved with academic EM, including many residency directors, researchers,

teachers and program chairs.

SAEM does not have a separate or formal resident section. However, SAEM is open to students, residents and fellows for membership. SAEM also has a full-voting resident member position on its board of directors. This resident participates in decisions for the organization and provides a resident's voice and a vote to the SAEM board. Nominations are usually submitted in the fall or winter, and require a letter of support from a residency director, a CV and a cover letter. SAEM's nominating committee selects two candidates and an election is held at the SAEM annual meeting each May.

SAEM also has a variety of committees and task forces, which cover topics including patient safety, national affairs and ethics. Residents can apply to SAEM for an appointment, which lasts one year beginning in May. SAEM membership is highly recommended to all EM candidates. Such membership will help you get acquainted with issues related to academic EM and career, and to the basic and controversial in EM research and education. Programs directors certainly view such SAEM membership or involvements as one of the most genuine student expressions of interest in academic EM, education and scholarly activity.

**THE EMERGENCY MEDICINE RESIDENTS' ASSOCIATION (EMRA) / THE AMERICAN COLLEGE OF EMERGENCY PHYSICIANS (ACEP):**  
([WWW.EMRA.ORG](http://WWW.EMRA.ORG) / [WWW.ACEP.ORG](http://WWW.ACEP.ORG))

EMRA is the largest and oldest EM resident organization. EMRA's goals include the promotion of optimal resident education and well-being, the facilitation of communication between residents, and the representation of residents to other organizations.

EMRA membership and involvement requires students, fellows and residents to simultaneously join the ACEP. ACEP was formed in 1968 and, with more than 21,000 members, is the largest EM organization. It was created at a time when EM was not a recognized specialty with the goals of properly training EPs, advancing the specialty and practice of EM, and improving patient care. Today, ACEP is heavily involved with national politics, and helps decide policy on issues such as access to emergency care, patient transfers, equitable reimbursement, and the funding of graduate medical education. Although ACEP has no formal resident section, it works very closely with EMRA. ACEP provides the administrative support to EMRA, various benefits to its members, and a non-voting representation to the ACEP Board of Directors through the EMRA president's participation.

EMRA's board of directors includes several positions. The first is a president-elect/treasurer that makes a three-year commitment to serve as treasurer, president and then past-president. A secretary is elected to a two-year

term in odd-numbered years to coordinate and disseminate information to members. The secretary is also the editor of *EM Resident*, EMRA's newsletter. Additional positions include two year-terms as ACEP representative, Residency Review Committee/American Board of Emergency Medicine (RRC/ABEM) representative, Academic Affairs representative, and as Technology Coordinator. EMRA also has positions for a Speaker and a Vice-Speaker for its Representative Council, which organizes the representatives from each EM residency program. Elections for EMRA positions occur in conjunction with ACEP's annual meeting each October. Further descriptions of these positions are available on EMRA's website.

Of interest to students is the EMRA Medical Student Committee, comprised of twelve students interested in EM. These students are responsible for planning EMRA's annual medical student forum and residency fair, increasing contact with medical schools and raising medical student awareness and involvement in EM. To apply for an appointment to this committee, you must submit a letter before March 1. Terms last one year starting each May.

#### **OTHER NATIONAL MEDICAL ORGANIZATIONS:**

An interest in EM does not preclude a student from becoming involved as a leader in non-EM medical organizations. There are many other national organizations that have resident and student sections that can benefit from the enthusiasm and dedication of a future EP. Some examples are: the American Medical Association ([www.ama-assn.org](http://www.ama-assn.org)), which has a very active medical student section; the American Medical Student Association ([www.amsa.org](http://www.amsa.org)), which is composed entirely of medical students and meets with government leaders to help influence the politics of medicine in the United States; the American Medical Woman's Association ([www.amwa-doc.org](http://www.amwa-doc.org)), which hosts an entire student senate; the Flying Samaritans; Project Hope; and Physicians for Social Responsibility.

#### **OTHER LEADERSHIP OPPORTUNITIES:**

Students, of course, can also demonstrate leadership in more individualistic ways. Identify what you like within EM, and what you are already skilled at or motivated to do. If you are especially skilled in writing, volunteer to work as an editor for a newsletter. This will be more valuable than organizing a bagel sale. If you do not mind uneasy conditions, volunteer to work your summer vacation or holidays in clinics or in non-profit humanitarian activities.

However, community or college activity, involvement in other non-EM interest or special-focus groups, and advocating for a minority or for an underserved community, are valuable and belong in your application file. PDs certainly value service as President or officer of a medical school student body, as a member

of the medical school admission or curriculum committees, providing leadership and coordination for physical diagnosis courses, preparing the yearbook, the annual medical student retreat, etc. Were you an Eagle Scout? Did you run the note-taking service of your medical school? Did you participate in team sports? Did you join the Peace Corps before matriculating into medical school? Along these lines of thought, list any such activity or experience in your CV. The opportunities and possibilities are numerous and cannot all be included in this chapter. Seek out the input of your mentors or faculty advisor. Talk to your seniors.

Yes, national, state or regional EM organizations and school-based EMIGs provide the most effective framework to channel your energy into a visible and useful product and to acquire adequate knowledge about the specifics of EM as a career and as a specialty.

### WHAT ARE THE CRITICAL INGREDIENTS OF EFFECTIVE LEADERSHIP?

Effective leadership requires many elements, which are beyond the scope of this chapter to describe adequately. In this chapter on student leadership, we would like, however, to address the *one* that we personally believe is most critical to develop for the success of a new organization. It is your ability to effectively command the necessary credibility and collaborative spirit among your peers, friends and opponents, as early as possible.

Such a strategy requires you, the rising leader in organized EM, 1) to maintain a low noise-to-product ratio, 2) to remember to act humbly and avoid overconfidence, and 3) to always try to state any matter in a positive, rather than in a negative way.

Bring out the positive first, and then talk about improving the process and conditions. Avoid calling the negative "negative"... Begin by focusing first on what aspirations you have in common, not only on the points of disagreement. Learn to listen and to see it from each other's perspective. Give credit to the other's perspective or prior contribution, when credit is due. And last but not least, give yourself and others who are critical of you, second chances. Such interpersonal skill is certainly most challenging to maintain consistently.

The demonstration of such skill is vital to encourage individuals or organizations to want to work with you, even if either they or you harbor prior bias, lack of appreciation or even disrespect for each other's style or productivity.

### CONCLUSION

In short, leadership is one of the most valuable, educational and gratifying experiences you can have as a medical student. The most important goal is to find an area that sparks your interest and inspires you. If a leadership position

exists and you like it, get involved and go for it. If does not exist, create it! Seek the help of a faculty mentor or advisor. Join your local EMIG, contact your EMIG seniors early on, and offer them your assistance. Join the EM organizations, participate in their national and regional conferences, and read their newsletters and e-mails. There are limitless possibilities, and each will help you develop and demonstrate leadership skills. This will add, not only strength to your EM residency application, but also, most importantly, awareness and legitimacy to your informed decision to choose EM as a career. Such awareness will therefore, of course, contribute to your development into the best EP you can be.

## 21

Emergency Medicine  
Interest Groups

## RESIDENT AUTHOR:

Boris V. Lubavin, MD (University of California, Irvine)

## FACULTY AUTHOR:

Amal Mattu, MD, FAAEM, FACEP (University of Maryland)

## FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Louisiana State University, New Orleans)

Is emergency medicine (EM) the right career choice for you? Whether you are or are not certain of your answer to this question, getting involved in your medical school's Emergency Medicine Interest Group (EMIG) can be a rewarding experience. The purpose of an EMIG is to teach students about careers in EM and to expose them to the breadth of opportunities that a career in EM can offer. The EMIG also gives students several leadership opportunities and the chance to acquire faculty mentors in the field. Every medical student interested in a career in EM should get involved in his or her school's EMIG.

## HOW YOU CAN GET INVOLVED

Initially, determine if an EMIG exists at your school by asking senior students, residents, or attendings in the Emergency Department (ED). If your medical school does have an EMIG, start attending the planned events and get to know the students who coordinate and lead the group. This will ensure proper exposure and access to information from more senior students and will also provide opportunities to become more involved. Once you have become familiar with the EMIG and its leaders, offer to help them coordinate events. This can involve taking over the advertising, arranging refreshments, making room reservations, or helping with any other tasks that may arise. Once the leaders of the interest group recognize that you are dedicated and responsible, you can offer to plan an entire event. This usually means contacting the speaker when lectures are planned, arranging a time, date, and place for the event, and directing all of the other students who will help with the event. It is unusual for you to have to do everything on your own because most responsibilities are divided up (refreshments, advertising, speaker, place, etc.). Once you have become a prominent participant in the EMIG, the next logical step is to assume a leadership position. In some EMIGs positions are appointed, while in others they are elected. Choose a position that interests you and apply for it. You may want to start with a lesser position or office and then, once you have proven to



yourself and to others that you can handle the time commitment and the EMIG truly interests you, you can seek a higher and more time-intensive position.

### LEADERSHIP WITHIN THE EMIG

EMIGs are generally organized differently from one medical school to another, but some of the leadership positions are universal. The president oversees the operations and delegates responsibilities. This often is a senior medical student who is intimately acquainted with all facets of operation of the group. Most EMIGs have several event planners, because of the time involved in coordinating the speakers' availability with the schedules of each of the classes of the medical school in order to choose a time that is convenient for all. Many EMIGs also have a treasurer to oversee the budget and be involved in fundraising activities. Funds for events may be obtained from the medical school itself (some schools monetarily support their on-campus clubs), the ED, drug companies, EMIG-held fundraisers, or state and local chapters of national organizations. Another position is that of the refreshment coordinator, who arranges something to eat, because most events occur during lunch breaks. An equation to remember for the success of any medical student organization is that food equals attendance. Hence, although this position does not carry a grand title, it is of significant importance to the survival of the EMIG.

Other positions that may be of importance are liaison positions for the various national, state, and local organizations. These positions may be held by some of the previously listed people or by other members of the EMIG. The liaisons are crucial to keeping close ties with and obtaining mentors from the major organizations, to send periodic updates to the group on activities around the country and your area, and also to stay apprised of the possibilities for obtaining EMIG grants from those organizations. It may also be prudent to have liaisons for each of the medical school classes. This helps facilitate communication of upcoming events to students in each class, and it also helps with coordinating schedules for events with each class.

One other position found in many EMIGs is a student liaison for research in their medical school's ED. Academic EDs should be able to provide that student with a list of ongoing research projects, as well as information regarding which faculty members are amenable to having medical students working with them on their projects. The student liaison can take that information back to the medical students so that they know of the opportunities at their medical school that are available for getting involved in EM research. Interested medical students can then contact the faculty member directly or through the student liaison.

Other positions and roles that could be sponsored and have been developed by EMIGs include the coordination of the "tag-along" schedules with EM fac-



ulty in the ED, the provision of career advisors to students interested in the specialty, and the establishment and administration of an electronic news service for your school.

### CONTINUED GROWTH OF YOUR EMIG

One way of making sure that the EMIG continues to thrive is to have representatives from the group at the yearly medical school "Organization Fair." This event is set up at the start of each new academic year to inform incoming students of the student organizations on campus. There should be a sign-up sheet for anyone interested to print their names and e-mail addresses so that they can be informed of future events. During the Organization Fair and at the first few meetings, the EMIG staff should try to have applications and literature available about the various national, state, and local EM organizations. Students should be encouraged to join these organizations to get a better understanding of what a career in EM is like, to learn about the local and national issues facing the field of EM, and to promote early involvement in these organizations.

### WHAT IF YOUR MEDICAL SCHOOL DOES NOT HAVE AN EMIG?

All of the above information has been provided with the assumption that your medical school already has an EMIG. If one does not exist, it is a golden opportunity for you to start such an interest group. To start an EMIG, first determine the level of interest at your school. If even as few as three or four students match into EM each year, you can expect to find over twenty-five current students with some degree of interest and a few willing to help with developing and managing the group. Medical schools have different criteria for forming a club and requirements to gain the support of the school. This information can be obtained from student government representatives, from the Office of Student Affairs, or from the Dean's Office. The next step is to secure support from the department of emergency medicine (ED) and its faculty. An academic ED usually has a faculty member who is in charge of undergraduate medical education, and this person would be a logical choice to approach first to provide leadership and support, and to serve as a mentor to students and the group. If this person declines, he or she may recommend someone else in the department better suited to that role. The person who is the faculty coordinator should provide guidance on when and how events should be planned and to help arrange speakers. Finally, the role of the officers must be delineated. Some EMIGs write a constitution that dictates how leadership roles are assigned and the various duties. Positions may be either elected or simply conferred to those who show the most interest. The leaders must be aware of the necessity to delegate responsibilities and to avoid taking on all

the tasks. This will provide the opportunity for more people to become involved and to facilitate and coordinate their individual roles and responsibilities. This will also groom participants to properly advance within the leadership of the organization.

### IDEAS FOR YOUR EMIG

To become a prominent and well-known organization within the medical school, it is recommended to schedule an event every one to two months. This allows ample opportunity for a variety of people to become acquainted with the various aspects of planning and implementation. At the start of each academic year, the leadership of the EMIG should meet and evaluate the events from the previous year in order to decide which events were most successful. They should then decide which events to plan for the upcoming year, including repeated events (from the previous year) and new events. Adequate planning prevents excess redundancy and also allows for a thorough overview of the entire year before academic schedules become too hectic. Each event must be publicized adequately throughout the medical school using flyers and e-mail reminders. A good first event is the "meet and greet," in which several faculty members and residents speak about careers in EM, why they chose EM, and their future interests. This is a great way for residents and faculty to discuss current research projects and to mobilize medical student assistance. The conversation at these meetings invariably turns to application and residency selection ("the Match") issues. Therefore, schedule the event so that the residency director can attend.

Other events that are usually well received are the workshops (hands-on). These can include splinting/casting, suturing, intubation or workshops for IV and blood drawing. Another popular project worth planning is a student tag-along program, whereby students sign up to "shadow" attending EM physicians in the ED. One variation of this idea is to develop a resident mentoring program, in which first and second year students are able to shadow residents in the ED. By participating in this program, students will become acquainted with someone who has recently (and successfully) gone through the process of planning a third and fourth year medical school schedule, applied to residency, succeeded in "The Match," and begun to think about EM career decisions. These "shadowing" and mentoring opportunities allow students to obtain real exposure to EM as well as to network with faculty and residents.

Other potential EMIG events are lectures by the EM faculty. Topics can include pediatric EM, toxicology, hyperbarics, sports medicine, international EM, disaster medicine, trauma, domestic violence, ECGs, and residency application. Event planners should determine the local EM faculty's special interests or expertise in order to schedule lectures exhibiting the breadth of EM.

Many medical schools have interest groups in pediatrics, family medicine, and other specialties. The EMIG event organizers might consider co-sponsoring some of the events with these other interest groups. This can help reduce the costs of the food and any other expenses.

At the end of the year, graduating medical students who have matched in EM residency programs should be encouraged to share some of their insights into the application process. A list of "pearls and pitfalls" is extremely useful for future reference by junior level students. Before the current fourth-year students graduate, a database should be made of their names, e-mail addresses, phone numbers, and residency programs to which they have matched. Future applicants from your school can then contact these alumni and receive information about their residency programs, visiting rotations, and housing possibilities for visiting rotations and interviews.

One additional idea for an EMIG to consider is the development of an EMIG-run electronic news service. This would provide articles, reports, and messages related to EM to enlisted medical students, via periodic emails. This task is time intensive and yet most valuable. The administrator would need to maintain updated addresses for all members of the network, to enlist new ones, and to delete the ones who graduate. One or more reliable moderators would have to be wisely selected. The task requires the frequent almost daily monitoring of multiple national, regional and EM-sponsored electronic news networks by the moderator. He or she must identify material that the moderator of the service believes is relevant, legitimate and appropriate for distribution to the students. Such networks include the "AHA News", "EMED-L," the Association of American Medical Colleges "Washington Highlights", the "California Healthline", the "CAL/AAEM News Service" as well as various networks, forums and websites sponsored by the American Academy of Emergency Medicine (AAEM), the AAEM Resident Section, the Emergency Medicine Residents' Association (EMRA), the American College of Emergency Physicians (ACEP), and the Society for Academic Emergency Medicine (SAEM). Consider joining their individual legislative networks and participating in their periodic effort to launch letter-writing campaigns to legislators. This certainly would raise awareness among all students making them well informed and better prepared for a career in EM and for the interviews they will have if they select EM for training.

## CONCLUSION

In summary, participation in or development of an EMIG is a truly rewarding experience. An EMIG allows medical students to learn more about career opportunities, to get acquainted with the EM faculty and residents at their medical school, to gain leadership experience in EM, and to become well informed about and better prepared for the field.



## 22

How to Plan Your  
Medical School  
Finances

## RESIDENT AUTHOR:

Kenneth Park, MS-IV (University of Southern California, Los Angeles)

## FACULTY AUTHOR:

Robert W. Wolford, MD, FACEP (Saginaw Cooperative Hospitals / Michigan State University)

## FACULTY EDITOR:

Margaret O'Leary, MD, MBA, FAAEM (The MBA Programs, Benedictine University, Illinois)

Medical school is an expensive proposition. Most students do not have the personal finances or family support to graduate debt free. Rather, most students accumulate significant medical school debt. In 2001, The Association of American Medical Colleges (AAMC) data reveal the general pool of graduating students owed an average \$80,940.<sup>1</sup> This amounts to \$97,750 among the select smaller group of indebted students.<sup>1</sup> Among Emergency Medicine (EM) applicants, it has been previously reported to be one of the (if not the) highest when compared to students applying to other specialties - with one California year 2000 report estimating a general EM applicant's mean indebtedness of \$95,700.<sup>2-6</sup> Although these amounts may seem daunting, it can be managed, in particular with the assistance of medical school financial aid offices. This chapter will discuss important aspects of medical school financing; however, the topic is far too large and complex to be completely covered here. Your school's financial aid office remains your best source of information.

The type of medical school - that is public vs. private - is the most important factor in determining the cost of medical education and amount of student indebtedness. According to the AAMC, the average first-year tuition for a state (public) medical school for an in-state student in 2000-2001 was \$11,217, compared to the average private school tuition of \$28,601.<sup>1</sup> In addition to tuition fees, students should be aware of other costs. These include moving expenses, housing and miscellaneous costs, such as furniture, telephone, and appliances, a physical examination, immunizations (not covered by financial aid), textbooks, laboratory coats, lecture transcripts, medical instruments, and professional clothes. Additional expenses include United States Medical Licensing Examination fees, board review course tuition, elective rotation travel and accommodation, and residency application costs (clothing, travel and accommodation for interviews). Basic living costs, such as food, clothing, transportation (i.e. car, auto insurance, gas, parking, registration fees, and the unexpected,

ever-dreaded car repairs), and recreation, must also be added to the tab.

These costs are potentially overwhelming. However, they can be broken into budget-required (e.g. tuition) and optional lifestyle (e.g. independent housing) expenditures. While tuition and some school fees are required, most of your spending can be tailored to meet your finances. For example, you may consider living with family members or sharing an apartment to reduce living costs. Some students can identify textbooks that are truly "required" and those that are "optional". Used textbooks and instruments are often available at reduced prices. Most importantly, you should develop an annual and a monthly budget. The amount you have to spend will depend on your personal finances and assistance you receive from others, including the government, your school, banks, family, or friends.

There are four ways to pay for medical school: grants or scholarships, loans, service-obligation scholarship programs, and cash. Few medical students are able to personally finance their medical education. Therefore, most students will depend on the financial aid office for assistance. Grants and scholarships are available from the federal and state government, the university, and from private organizations. They are gifts to the recipient without any requirement to repay the donating organization. Most are need-based, although some may be merit-based. Many scholarships are restricted to select populations, and may stipulate the recipient's future behavior, such as requiring minimum levels of academic performance or specific types of residency selection. An excellent website to search for grants is [www.fastweb.com](http://www.fastweb.com), a searchable database with more than 180,000 private sector scholarships, fellowships, grants, and loans. For recruitment purposes, some medical schools offer scholarships to particularly strong applicants. These scholarships may pay for some or all of the student's tuition. In general, public schools offer less money in scholarships and grants than private ones do.

Loans are available from the federal and state government, the medical school, and private banks. With the exception of private, unsubsidized loans, loan eligibility is determined by need. Need is determined in two different ways: Federal Methodology and Institutional Methodology. Federal Methodology uses the Free Application for Federal Student Aid (FAFSA) form and calculates a student's "expected family contribution (EFC)" based on the student's and spouse's personal income and assets. The *Federal Methodology* does not consider parental assets in determining eligibility. The *Federal Methodology* is used for Title IV Programs supported by the Department of Education (ex. Federal Stafford Student Loans; and Federal Perkins Loans).

The *Institutional Methodology*, on the other hand, includes parental income and assets, household size, and number of family members attending college to

calculate the parental contribution to the student's education expenses. Universities generally assume that parents will support their children through graduate school. This assumption, though incorrect, still plays a role in your financial aid package. The *Institutional Methodology* is used by the medical school and by Title VII Programs supported by the Department of Health & Human Services (e.g. Primary Care Loans; and Loans for Disadvantaged Students).

Private loans may replace the expected personal or parental financial contributions.

Loans may be subsidized or unsubsidized, which determines when interest on the loan begins to accrue. Subsidized loans do not accrue interest until after graduation, while unsubsidized loans may not require payments until after graduation, but begin accruing interest immediately. Loans may have fixed (unchanging) or variable interest rates with or without interest rate caps (limits how high your interest rate can go). Additionally, most loans carry loan fees, a percentage of your loan taken by the lender as processing and collection costs prior to disbursement (giving you the money). Because loans vary from year to year in their interest rates and in their exact terms, you should consult with your financial aid office.

Service-obligation scholarship programs are the third option. These programs generally pay for tuition, required expenses, and a modest living stipend in exchange for a commitment from the student to work in a particular field and/or location for a specific time period. The three best-known programs are the Indian Health Service (IHS) Scholarships, the National Health Service Corps (NHSC) Scholarships, and the United States Armed Forces Health Professions Scholarship Program (HPSP). IHS Scholarships are available to Native Americans and Alaskan natives in exchange for service, typically on an Indian Reservation. NHSC Scholarships require that the recipient enter a Family Practice, General Internal Medicine, General Pediatrics, Obstetrics-Gynecology, or Preventive Medicine residency program and practice in an under-served area in the United States. This is a good program for students who are interested in primary care medicine, especially in regions with limited access to medical care.

The United States Armed Forces HPSP is available through the Army, Navy, and Air Force. This pays the student throughout the calendar year. Students are required to fulfill an active duty requirement of 45 days per year, which may be done in the summer or during a military clerkship. Recipients may be required to train in a military residency program. All of the aforementioned programs require one year of service for each year of support, with a minimum two-year obligation. Military residency may increase the number of years of



service, but the service obligation is at least equal to the number of years of support. Certain states and communities may also offer service-obligation scholarship programs. Funding for tuition and living expenses may or may not be taxable depending on the program. If you are interested in these options, contact your financial aid office.

While students entering service-obligation scholarship programs have certain post-graduate issues, most physicians entering an Emergency Medicine residency program will be concerned with loan repayment. Most residents will have a number of different loans from different institutions with different payment schedules, terms, and conditions. Being organized is essential! You are personally responsible for making payments on time and for filing for loan deferrals or forbearances. A deferment is a period of time when the borrower is not required to make any payment on the loan. Subsidized loans do not accrue interest during a deferment, although unsubsidized loans will. Forbearance is similar to a deferment; however, during the forbearance the borrower will either 1) not be required to make payments on the loan, or 2) be required to make reduced payments on the loan. All loans, both subsidized and unsubsidized, accrue interest during forbearance. Depending on when you began your loans, before or after July 1993, your loan terms will vary. Most students will be able to receive forbearance for their federal loans during residency training. Interest capitalization is a possible risk of forbearance. Some loans will add the accumulated interest, at periodic times, to your principal (the amount that you borrowed, from which interest is calculated). This can substantially add to your total loan cost. Students should again discuss their options with their financial aid office. Whether you opt to forbear or to defer your loan during residency is a matter of personal choice. It is to your advantage to make loan payments during residency.

Unless you defer or forbear during residency, loan repayments generally begin after graduation from medical school. The Standard repayment schedule is a 10-year plan with a monthly payment that does not vary. Another option is the Graduated repayment schedule in which the student pays less than the Standard schedule initially, but pays more than the Standard at the end of the 10 years. Because less of the loan is repaid during the early years, there is more debt to accumulate interest, and the overall cost of the loan is slightly higher than with a Standard schedule. An Income Contingent repayment schedule sets payments as a percentage of your adjusted gross income. This makes your cash flow easier to manage but may increase your overall cost. Extended repayment schedules of 25-30 years are also available and may make individual payments more manageable; however, this greatly increases your overall loan cost. Some loans carry penalties for early payment, although most allow early



repayment, reducing your interest costs. Many loans offer incentives for direct payments from your checking account. Not all of these options may be available, and you should check with the lender and your financial aid office to determine their availability.

Loan consolidation reduces multiple loans into a single loan, which may be easier to keep track of, but does not reduce overall debt. It may also smooth your cash flow by reducing your monthly payments and extending your payment plans. Additionally, you may choose to consolidate your loans to gain access to additional deferment opportunities. A loan consolidation eliminates your prior loan contracts and starts fresh with a new one. Thus, if you have exhausted your available deferments and forbearances, new ones may be available with your new loan. You should remember, however, that any options that were available to you on your old loans do not transfer to the consolidation loan. A loan consolidation is a brand new loan with its own terms and conditions.

Are loans and loan payments the only financial considerations you have during medical school and the 10-15 years after? Of course they are not. Home mortgages, retirement savings, and investment opportunities must also be considered. Remember that home mortgage providers may require cosigners if you have a poor credit history or have too much outstanding debt. This is not to discourage home ownership, but merely to emphasize that it is another debt that you will be incurring and will require careful management.

Financial planners all say that the earlier you start saving for retirement, the better. Just as lengthening a loan repayment period increases the amount of interest paid, early savings allows you to accumulate much more money in the long run. Even setting aside \$100/month can make a big difference towards your retirement, especially if you invest in a tax-deferred retirement fund.

Finances during medical school are complex and difficult, and new financial challenges await you upon graduation. Your best resource is your financial aid office, which can help you understand the system and give you a clear picture of your options. An excellent resource is the *"(MD<sup>2</sup>): Monetary Decisions for Medical Doctors - An Electronic Resource Manual for Financial Planning throughout Your Career."* This is published by the AAMC, and is available online at [www.aamc.org/about/gsa/md2/start.htm](http://www.aamc.org/about/gsa/md2/start.htm). Try to obtain grants and scholarships, which do not require repayment. Consider service-obligation scholarship programs as an alternative means for funding your education. When considering loans, note the nuances and differences between subsidized and unsubsidized loans, fixed interest rates, and variable interest rates with and without interest rate caps. Compare repayment plans between loans and do what you feel is best given your situation. Consult early and often the financial aid office, friends, family, mentors, colleagues, and financial planners.

### References:

- 1) <http://www.AAMC.org>
- 2) Park, R. AAMC Data Report: Graduating medical students' debt and specialty choices. *Acad Med.* 1990;65:485-486.
- 3) Kassebaum DG, Szenas PL. Relationship between indebtedness and the specialty choices of graduating medical students' 1993 update. *Acad Med.* 1993; 68:934-937.
- 4) Kazzi A. Resident loans and indebtedness. Invited Presentation to the CORD General Assembly. The Council of Emergency Medicine Residency Directors, Chicago, October 14<sup>th</sup>, 2001.
- 5) Kazzi A. Resident loans and indebtedness. *CORD Newsletter*. The Council of Emergency Medicine Residency Directors, February 2002.
- 6) Brillman J. Resident Indebtedness Taskforce Report. *The SAEM Newsletter*. October 2000.

## 23

Fellowships and  
Subspecialty  
Certification

## RESIDENT AUTHOR:

Bradley N. Younggren, MD (Madigan Army Medical Center, University of Washington)

## FACULTY AUTHOR:

Vince Markovchick, MD, FAAEM, FACEP (Denver Health, University of Colorado)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (West Suburban Health Care, Illinois/ Rush / Cook County Hospital, Chicago)

## INTRODUCTION

As emergency medicine (EM) has grown as a specialty, so has the need for additional training in various aspects of our field. This is still an evolving area within the profession as we find ourselves tasked with additional, and different, responsibilities on a day-to-day basis. While some found themselves headlining the advancement of medical toxicology, others became very involved in the development of pediatric EM. Others found that the community relied on us as emergency physicians (EPs) to organize and coordinate the Emergency Medical Services (EMS) of the community. Additional expectations have arisen that we, as EPs, will have knowledge and ability to deal with natural disasters and those disasters conceived by terrorists. All of these led to the development of additional training opportunities so that EPs could further hone their skills in one of these particular areas. EM fellowships provide this additional training in both clinical research and application, as well as providing the opportunity to achieve additional degrees such as a Masters in Public Health (MPH).

## WHY DO AN EM FELLOWSHIP? WHO IS IT FOR?

The first question you have to ask yourself is, "Why would I want to do a fellowship following my EM residency?" The answer to this question will be unique to each individual. In addition, answers will evolve as the opportunities that present themselves for fellowship-trained EPs grow. At this point, financial incentives are not paramount for the fellowship-trained emergency physician (EP). In fact, some research suggests that working in a pediatric emergency department (ED) following fellowship in pediatric EM (which in many instances implies association with an academic center) could actually decrease your salary potential.<sup>1</sup>

Motivation to pursue the fellowship track comes from a genuine interest in the field coupled with the increased academic opportunities that can arise from such involvement. In addition to added academic responsibilities required during fellowship, more responsibilities in the community could be expected.

Getting involved in a community's EMS system or local toxicology consultation are two such examples. All in all, these programs are evolving and this is the time when we, as EPs, could be pioneers in fellowship development.

### LOGISTICS OF DOING A FELLOWSHIP

Fellowships are typically pursued immediately following residency training in EM. Typically, one applies during residency if he or she desires to go on directly to fellowship training. One also could return to fellowship after a few years of general practice.

Beyond deciding that you want to pursue fellowship, it is important to decide if you are going to pursue one formally recognized as a subspecialty by the American Board of Emergency Medicine (ABEM). The four subspecialty fellowships currently approved are medical toxicology, pediatric EM, sports medicine, and undersea & hyperbaric medicine. These have their own subspecialty board examinations, which individuals must sit for following fellowship training and prior board certification in EM.

If you decide that this formal recognition is not a necessity, there are many other interesting and exciting areas in EM that have additional training opportunities. These include administration, EMS training, ultrasound, trauma/critical care, and forensics (see complete listing in the table at the end of the chapter). These programs are not necessarily as structured in terms of the requirements, so one must spend extra time researching the various programs and see which one has the most beneficial curriculum. Again, one must plan ahead and prepare to apply one year before desired enrollment in a fellowship.

### FORMALLY RECOGNIZED EM FELLOWSHIPS

#### Medical Toxicology

Medical toxicology training has been around for a long time for both physicians and non-physicians alike. Not until 1992, however, did the American Board of Medical Specialties (ABMS) recognize subspecialty certification in medical toxicology. The primary objective of this specialty is to train physicians who will have expertise in the diagnosis, management, and prevention of poisoning not only from medications, but also from environmental and occupational exposures as well. There are many different roles an EP could take on following toxicology training. Most continue working in the ED (at least part time) maintaining clinical acumen. In addition, consultation can be provided for intensive care units, outpatient clinics, occupational medicine clinics, medical schools, the legal system, and governmental agencies. Perhaps most critically this affords you the opportunity to work for local Poison Control Centers, which provide 24-hour consultation in many parts of the country.

### Pediatric EM

Pediatric EM has had an interesting evolution in the United States with fellowships developing in the mid-1980s. Pediatric EPs have found themselves working in pediatric EDs either from the pediatrics/pediatric EM route or from the EM/pediatric EM route. The first EP completed the sub-board examination in 1992, so this is still an area in its infancy. For the EP, this additional training affords you the additional expertise in dealing with pediatric related emergencies. After fellowship, individuals can work in urban, tertiary care pediatric EDs and maintain the option of working in another place that cares for adults.

Currently these programs are two years in duration for an EM residency graduate and three years for a pediatric residency graduate. While continuing clinical ED shifts, fellows can expect to take additional electives such as anesthesia, trauma, toxicology, orthopedics, and pediatric intensive care. Most have requirements for additional teaching responsibilities as well as involvement in research projects and publications. Additionally, most programs have instruction on the administrative aspects of EM. This is clearly a very exciting subspecialty in EM that will continue to evolve in the near future as more EPs pursue fellowship training.

### Sports Medicine

Sports medicine is a fellowship track not unique to EM graduates, which became a recognized subspecialty in EM in 1992. There are many different opportunities that exist for an individual interested in this field. Training can allow one to get involved in a sports medicine clinic, or assist with high school, semi-professional, or professional teams as a team physician. This can provide exciting job variety for a physician allowing him or her to continue managing critical patients in the ED as well as participating in a regular clinic devoted to sports injuries.

### Undersea & Hyperbaric Medicine

Another field that is not exclusive to EM graduates, though fits well with our training and practice, is hyperbaric medicine. This area has its own certification and, in addition, subspecialty certification can be obtained through the ABEM. There are many interesting work opportunities that this field provides physicians. Hyperbaric medicine is used clinically to treat divers who have ascended too quickly without proper decompression causing "the bends" and other maladies. Physicians can oversee these facilities, which are located throughout the world. With an ever-increasing popularity of both sport and commercial diving, this aspect of medical oversight continues to prosper.

This field also affords a number of interesting research opportunities. Beyond research in dive medicine, hyperbaric research involves many other dis-

eases such as burns and necrotizing fasciitis.

## OTHER FELLOWSHIPS FOR EM PHYSICIANS

### EMS / Prehospital Medical Direction

EMS is clearly an area of medicine where EPs have come to the forefront in terms of development, management, and education. Many of us deal with some aspect of EMS on a daily basis during our clinical practice. Although formal subspecialty certification is not available in EMS through ABEM, it has clearly defined curriculum requirements. Some would argue that formal training is not necessary in this field, that EMS is an inherent part of our residency training and subsequent practice. Others would contend that in a continually evolving field, further demands for subspecialty training would eventually become the norm in EM as it has in many other specialties. Polled in 1998, 89% of EM residents felt that EMS physicians should have additional training beyond that of their residency.<sup>2</sup> This is clearly a personal decision.

There are basic guidelines put forth by the Society of Academic Emergency Medicine (SAEM). These dictate that training should include education and supervision of local EMS personnel in an effort to become proficient at running an entire EMS system. Didactics will include EMS training as well as disaster preparedness, telemedicine, medical implications of hazardous materials, and injury prevention. These programs run typically 1-2 years in duration and are supposed to limit clinical duties to no more than 12 hours a week. Most require some sort of research project with the goal of journal publication during fellowship tenure.

### Disaster Medicine

This is a continually emerging area within EM. Many EPs are involved in some aspect of disaster medicine without any formalized training. This could include community education for natural disasters, such as earthquakes or city preparation for terrorist incidents with chemical or biological weapons. As many of these issues receive increased media attention, the public demands to have both leadership and training in preparation for such incidents. Physician involvement is paramount; this is especially true for the EP who could find himself in charge of a disaster area response team, for example. As a result, formal educational opportunities have evolved to allow the individual to increase his skills in this field.

There are a few disaster medicine fellowships currently available in the United States. These are typically two years in duration, molded around the goal of achieving an MPH degree in the process. From a practical standpoint, these are typically positions that require clinical responsibilities in an academic center, along with research requirements geared towards some aspect of disaster management. Currently listed are two fellowships, one at George

Washington University and one associated with Brown University. There are also new opportunities available through Emory University and the Center for Disease Control and Prevention (CDC), which appears to be an exciting new program.

#### International Emergency Medicine

International emergency medicine (IEM) has evolved, as there has been an increasing demand for physicians knowledgeable in not only domestic medicine practices, but also the varying medical and cultural practices of other countries. Many countries have asked for the assistance of U.S. physicians to help structure EMS programs, teach ACLS, and instruct in such areas as wilderness medicine. In addition, EPs have increasingly found themselves working with international relief and developmental agencies such as the International Red Cross, the Peace Corps, and the U.S. Office of Foreign Disaster Assistance.

In response to these demands, fellowships have started in an effort to train EPs to fulfill these roles better. A 1999 paper written in *Academic Emergency Medicine* best outlined the criteria of these programs.<sup>3</sup> Goals of the programs should include designing and implementing international emergency health systems. In addition to continuing with clinical ED responsibilities in an attending capacity, the fellow can expect to act as an educator and researcher during a fellowship which is usually 1-2 years in duration. Additional degrees might be obtainable in tropical medicine or public health in certain circumstances. For someone interested in international public health this fellowship could be a perfect match.

#### Research

As EM takes a more prominent role in the current literature, it becomes apparent that we will equally be responsible for providing graduates with expertise in the field of EM research. Clearly as has been shown in other areas of medicine, residency itself does not provide sufficient training for an individual to become proficient at research. This knowledge is crucial for both publication and, more importantly, federal funding and grant money. As a result, a number of research fellowships have been developed in multiple different areas of EM and some of these provide the fellow with the opportunity to pursue an MS degree in the process.

These fellowships are typically one to two years in duration and residents are usually required to have completed an EM residency. The exceptions are those with advanced degrees such as those with a Ph.D. and/or Pharm.D.<sup>4</sup> As is recommended in other fellowships, these should include a minimal amount of clinical duties, the recommendation being no more than twelve hours per week. Other responsibilities typically include didactic teaching in biostatistics, ethics methodology, and grantsmanship. In addition to the baseline research that

is expected, most programs expect at least abstract submission related to work if not completion of a publishable paper.

### Trauma/Critical Care

Trauma and critical care are areas that EPs are involved with on a daily basis. However, this continues to be a point of contention with other specialties that feel that we do not achieve proper training by not seeing the "longitudinal nature of critical injury and illness."<sup>5</sup> Although EPs have participated in general critical care fellowships in the past, we are just beginning to see the emergence of trauma/critical care fellowships designed specifically for the EP. One such program is at Baltimore Shock Trauma and is one year in duration. This year of training includes intensive involvement in trauma and critical care, as well as providing time for research and elective training. This is an exciting, young fellowship tract that many feel will eventually evolve into formal recognition. However, to date there is no subspecialty certification for EPs in this field.

### CONCLUSION

EM is still considered a young specialty compared to some of the more classic training in medicine, surgery, and pediatrics. As such, the fellowship training available to EPs is even more so in its infancy. At this point there are four recognized subspecialties, with many interesting and useful fellowships that are not currently recognized. The opportunities are endless to be a pioneer and help form the future fellowship programs in the United States for EM. One must review why he or she wants to pursue a fellowship. That question being answered, the best available advice is to pursue something that you truly find interesting because that will create both job satisfaction and enthusiasm. Whether it be on an NBA basketball court or at a hurricane relief effort in Central America, EPs can and will continue to be participants in a vast array of physician roles.



**Emergency Medicine Fellowships**(adopted from SAEM website - see [www.saem.org/services/fellowsh.htm](http://www.saem.org/services/fellowsh.htm))

Administration	Clinical Forensic Medicine
Disaster Medicine	EM / IM / Peds
Emergency Medical Systems	Environmental Health
Geriatric Emergency Medicine	Hyperbaric Medicine
International Emergency Medicine	Injury Control
Medical and Occupational Toxicology	Medical Education
Medical Informatics	Neurological / Neurovascular
Pediatric Emergency Medicine	Research
Research - Clinical Sciences	Sports Medicine
Toxicology	Toxicology or Pharmacology
Trauma / Critical Care	Ultrasound

**References:**

- 1) Hennes H, Frisbee SJ, Paddon KJ, Kelly CM. Current income profile for academic pediatric emergency medicine faculty. *Pediatr Emerg Care*. 1999;15:350-4.
- 2) Willoughby PJ, Suter RE, Williams D, Perina DG, Suter RA. Resident perspectives of EMS as a subspecialty. *Prehosp Emerg Care*. 1998;2:47-51.
- 3) VanRooyen MJ, Clem KJ, Holliman CJ, Wolfson AB, Green G, Kirsch TD. Proposed fellowship training program in international emergency medicine. *Acad Emerg Med*. 1999;6:145-149.
- 4) Biros MH. SAEM emergency medicine research fellowship guidelines. *Acad Emerg Med*. 1999;6:1067-68.
- 5) Bozeman WP, Gaasch WR, Barish RA, Scalea TM. Trauma resuscitation/critical care fellowship for emergency physicians: A necessary step for the future of academic emergency medicine. *Acad Emerg Med*. 1999;6:331-333.



## 24

Academic vs.  
Non-Academic Careers  
in Emergency Medicine

## RESIDENT AUTHOR:

Lillian Oshva, MD (Bellevue Hospital / New York University)

## FACULTY AUTHOR:

Tom Scaletta, MD, FAAEM (West Suburban Health Care, Illinois/ Rush/ Cook County Hospital, Chicago)

## FACULTY EDITOR:

Margaret O'Leary, MD, MBA, FAAEM (The MBA Programs, Benedictine University, Illinois)

Emergency medicine (EM) offers a wide range of practice opportunities to physicians. The decision to work in a community hospital versus an academic center can be challenging for residency graduates. Residents typically spend most of their time in academic settings, and have a very good sense of what life would be like as an academic attending physician. By contrast, most residents spend less time in the community hospital setting.

The distinctions between academic and community positions are often blurred. Larger community hospitals often house primary care residency programs and offer a full complement of specialty services. Academic programs may allow or require attending physicians to work at one or more community hospitals. In reality, regional differences across the U.S. are more striking than hospital differences. Academic positions vary, with some emphasizing research while others focus on teaching. Physicians in community hospitals often teach, conduct research, and contribute to the medical literature. Academic and community emergency physicians (EPs) both hold academic as well as professional leadership positions within our field. In spite of the overlap between academic and community practice settings, certain distinctions emerge between the two in the following areas: compensation, lifestyle, research, education, administration, interdepartmental physician contact, and physician-patient interactions.

### WHO CHOOSES A CAREER IN COMMUNITY VERSUS ACADEMIC MEDICINE?

*What is the distribution of community versus academic careers and what do residents base these choices upon?* The 1999 "Management & Physician Compensation Report" (published by Daniel Stern and Associates) collected data from 935 U.S. EPs. The distribution by hospital type was 48% community non-teaching, 40% community teaching, and 12% university academic. In 1997, S.A. Stern (University of Michigan) surveyed program directors of all U.S. EM resi-

dencies and concluded that 30% of residents pursued academic positions with emphasis on teaching, 5% pursued academic positions with emphasis on research, and 65% pursued private practice positions.<sup>1</sup> She also found that several characteristics of residency programs positively correlated with a higher number of graduates pursuing academic careers. The most predictive departmental qualities included: increased funding for research and availability of research support services (defined as at least two of the following: a research nurse/coordinator, a doctoral assistant/statistician, dedicated laboratory space with technical support, and more peer-reviewed publications).<sup>1</sup>

*What values were important to physicians who chose community versus academic careers?* In 1994, Sanders (University of Arizona) surveyed over 1,000 Society for Academic Emergency Medicine (SAEM) members and 2,000 American College of Emergency Physicians (ACEP) members to understand why individuals chose their community or academic jobs.<sup>2</sup> Community physicians considered lifestyle issues first. Family or leisure time, as well as income level, were the most important factors. In contrast, those choosing academic careers considered role models and the value of research most important.<sup>2</sup>

*What factors are most important to residents when considering community versus academic careers?* In 1992 Sanders also surveyed approximately 1,500 residents in EM about factors influencing career intent.<sup>3</sup> Those planning an academic career were more likely to express an interest in researching problems, teaching others, and contributing to medical knowledge. They were less likely to emphasize free time and practice location. Consistent with these values, residents pursuing academics were more likely to have completed research or written a paper during training.<sup>4</sup>

*Do resident intentions to pursue academic positions change throughout their training?* Neacy, et al surveyed EM residents in 1997 to understand which residents are more likely to be interested in an academic career.<sup>5</sup> They found that a relatively high percentage of residents initially expressed an interest in an academic career and this interest waned as residency progressed. Only a minority of residents believed that their training provided them with the specific skills needed to succeed in an academic career. Even after fellowship training, only 24 percent of respondents felt ready.<sup>4</sup>

## WHAT ARE THE SIGNIFICANT ADVANTAGES AND DISADVANTAGES TO THE VARIOUS CAREER TYPES?

### Compensation

On average, salaries in private practice are higher than in academic practices. The 1999 Daniel Stern and Associates report listed total compensation at the 50<sup>th</sup> percentile to be \$160K for academic employees (n=93), \$185K for non-academic employees, and \$209K for non-academic independent contrac-

tors. Of course, employees enjoy significant benefits (i.e., medical coverage, CME allowances, and pension programs) and have a portion of their FICA paid by their employer.

Private groups are generally keenly aware of the documentation requirements for optimal coding and are aggressive in collecting for their professional services. Community physicians who work for large health management organizations (HMOs) are usually paid a lower rate than are their independent colleagues. These large for-profit corporations seek first to maximize revenues to shareholders, not to their physician employees.

Academic attendings face other time commitments beside clinical shifts. Rather than the average 36-hour community physician workweek, academicians generally devote additional time to teaching and research. In addition, because education funding is dropping, academic positions usually offer lower salaries. Often, academic EPs moonlight in a community hospital several times a month in order to boost their salary and maintain their procedural skills.

The essential threat to private practice salaries is the growth of contract management group market share. The essential threat to academic salaries is limited research and education grant funding. In addition, changes in federal program funding as well as supply and demand dynamics periodically shift salary ranges by geographic location and practice situation.

#### Physician-Patient Interaction

In a low-volume community hospital, the EP independently performs all necessary emergent procedures and does not have the luxury of casually bouncing questions to a colleague. In high-volume community hospitals, there may be two or three physicians working simultaneously.

In academic institutions, residents act as intermediaries between patients and attending physicians. To varying degrees, the attendings depend upon residents and medical students to gather information about each patient, and the resident or student helps to choose the course of therapy for patients. Attendings supervise resident procedures and generally perform only the toughest ones, when a resident is unsuccessful.

Physician-patient interaction is an important aspect of all jobs in EM. Private practice physicians enjoy direct interaction with every patient, while academic physicians provide varying degrees of direct patient interaction depending on the skill of the resident they are supervising and, frankly, their interest in the medical problem.

It is important, however, to note that in recent years many academic departments have required direct attending physician involvement in patient care in order to meet increasing hospital administration expectations for prompt and quality patient encounters in the emergency department (ED). Patient satis-

faction issues and third-party payers have resulted in greater direct bedside interaction between faculty and patients. This process has become the "rule" in many academic EDs, in particular since Medicare reimbursement, audits and compliance programs require direct attending presence and extensive documentation for the services provided by the residents and students. In most academic institutions, these changes as well as reduction in graduate medical education funding had a direct impact on the level and form of compensation received by academic faculty in the ED. Protected time availability as well as academic income and salaries are shifting from an institutionally-subsidized to a private practice model where they are directly dependent on the amount of professional fees generated by the attending faculty.

### WHAT ARE THE MOST SIGNIFICANT BENEFITS OF A CAREER IN ACADEMIC MEDICINE?

#### Teaching and Leadership

Many academic physicians cite their interactions with medical students and residents as among the most rewarding aspects of their jobs. The ability to influence and mentor successive generations of doctors is a motivating force and reduces the risk of burn out.

Physicians working in the community have an opportunity to teach patients with every encounter. Often, community physicians take on the additional role of educating their nurses and also the hospital's medical staff on newer EM treatments.

Regardless of the setting in which they practice, EPs are particularly well placed to assume leadership roles in the development of public policy or health-related education of the greater communities, in which they live or work.

#### Writing and Conducting Research

The opportunity to advance our understanding of diseases and disease treatments is very compelling to many physicians. Completing research projects and publishing scientific papers are extremely satisfying to those who are academically inclined. It is also a chairperson's overt expectation of his/her faculty.

Performing clinical research is in no way confined to tertiary academic hospitals. Many community physicians often have significant discretionary time for research and writing, if they are so inclined.

#### Clinical Hours

Many academic programs allow attendings to lighten their clinical workload as they assume a greater number of administrative and research responsibilities. This greater diversity in work activities is sometimes credited with greater career longevity and satisfaction among academic physicians.

Private EPs may also work less clinical hours as their personal debts (e.g., home mortgage and children's education) are satisfied. Some EP groups widen the margins of their hourly pay for undesirable shifts in order to attract those willing and interested in maximizing their income.

In general, physician administrators in all settings are significantly less likely to work night and weekend shifts.<sup>6</sup> Senior academicians have typically more access to grant funding that enables them to buy their time off clinical shifts. Such funds allow them to give away undesirable shifts to part-time faculty or to younger faculty who are more eager to work clinically to increase their income.

### WHAT OTHER DIFFERENCES BETWEEN COMMUNITY AND ACADEMIC SETTINGS SIGNIFICANTLY AFFECT THE PHYSICIAN PRACTICE ENVIRONMENT?

#### Reliance on Consulting Services

In teaching hospitals, it is generally easy to seek advice from consulting services, which are often located within the hospital, even at night. This may reduce the clinical decision-making role of the academic EP.

In contrast, the availability of such consulting services varies significantly among community hospitals. This is even more challenging in smaller, more rural centers, in particular with patients requiring more technology-dependent services such as trauma, interventional cardiology, neurosurgery, and cardiovascular surgery. They often require transfer to tertiary hospitals. Issues of who, when and how to transfer patient care and how to secure on-call back up have been making national headlines under the heading of "the safety net crisis" in EM. Frequent calls continue to be made to better define and to revise the "Emergency Medical Treatment and Labor Act" (EMTALA) and have resulted in much controversy and in several publications, articles, and taskforces about what was originally meant to serve as a "patient anti-dumping law."

#### Interdepartmental Interactions

Academic programs are often situated in public hospitals where emergency department interactions with admitting or consulting service attendings are minimal. This has advantages and disadvantages. A senior resident from a specialty service usually offers more theoretical knowledge than experience. On the other hand, the ED attending usually trumps all levels of residents and fellows regarding what constitutes the most appropriate treatment and disposition decisions for patients in our clinical area.

Working in a private hospital often requires frequent discussions with the private attendings about their patients. At times, the ability to arrange prompt outpatient follow up in private hospitals can ease patient disposition dilemmas. At other times, private attendings may attempt to block the admission of a

patient that the EP believes is appropriate for admission. This is further complicated by the stronger ability of the medical staff to pressure ED physicians and groups and to threaten the stability of the EP group contractual relationship with the hospital. This is particularly more pronounced if EPs have limited their involvement in hospital committees and medical staff functions and responsibilities.

### Administrative Tasks

Both community and academic positions require that a fair amount of time be devoted to administration. Typically, the lion's share of this work goes to the clinical operations director or department chairperson. Tasks such as sitting on hospital committees outside of the department or quality assurance efforts within the department are common to both environments. Community roles may require (and offer the chance to become more skilled at) business-related activities, including negotiations, contract or legal issues, or marketing efforts. Academic administrative tasks typically include more residency-related educational, research and administrative roles and responsibilities.

WHAT QUESTIONS SHOULD I CONSIDER DURING A JOB INTERVIEW? ASK SOME, AND DISCRETELY IDENTIFY OTHERS.

### Any Setting:

- What are the greatest frustrations with the job?
- How well do the nurses and physicians get along?
- Is there a high rate of staff turnover? And, if so, why?
- Are the weekend and night hours shared equally (or are junior physicians treated differently)?
- What is the average waiting room time for each triage class?
- What are the laboratory and radiology turn-around-times?
- How much time does a patient spend in the department once the decision to admit is made?
- How often is the ICU (or other units) full and how do "boarders" impact the ED?
- What forms of dictation and charting systems are used? Are computer-generated discharge instructions being used?
- What occurs at "sign out" time?
- What was the result of the last Joint Commission on Accreditation of Healthcare Organizations (JCAHO) review?
- Is the ED truly autonomous or is it a division of internal medicine or general surgery? How does that impact operations, compensation and promotion in the ED group?
- What hospital committee work, administrative responsibilities, and meeting attendance are expected of me?



- Are any particular merit badges (e.g. ATLS, PALS, ACLS) required? If any of them is required, is the associated time and cost provided for by the EP group or by the institution?
- What is the length of your initial contract? What are the termination clauses?
- Is there a probationary period? How long is it? What are the steps required for active medical staff membership?

For all settings, identify the following discretely - perhaps by contacting one of the currently employed junior physicians in the ED group.

- Is there a due process and/or mediation policy?
- Are there any forms of incentive plans for higher than expected clinical and non-clinical productivity?
- Is there a pre-defined mechanism that provides access to individual billing and collections for services that are rendered? Is it periodic? Or do you have to request such access?
- How is the clinical schedule made and how do you share undesirable shifts? Is there a pay differential for holiday, weekend and night shifts? (Identify this discretely)

#### Community Positions:

- What specialties are lacking or limited?
- What type of patients must be transferred and is this influenced by the insurance status?
- How are the medical staff call schedules determined and what are typical response times?
- Do on-call physicians provide follow-up in a timely manner and without regard to insurance status?
- How are private patients of medical staff members handled (e.g., do they telephone orders to the emergency nurses)?
- Must attending staff be called about all of their patients regardless of the seriousness of the medical problem?
- Are the EPs expected to write inpatient orders?
- Is the EP responsible for responding to "codes" on the floors?
- Must you relinquish due process or accept a non-compete clause?
- Are the financial books open for your review?
- What is required to become a full partner (i.e., time and cost)?
- Are decisions affecting the group made in a democratic manner?
- Are EPs credentialed to perform endotracheal intubation and which anesthetic agents are available to them?

- Are EPs limited from independently ordering certain tests, performing certain procedures, or requesting consultations?
- How are differences in medical opinion resolved (e.g., the EP plans admission and the primary care attending refuses)?
- Is there a partnership option? If there is one, is it graded with multiple levels of partnership? What review and promotion mechanism is used to move up the partnership track?
- How are decisions made to select the medical director? Identify discretely whether EPs are allowed to provide input into decisions and issues that have the potential to impact the whole EP group?

#### Academic Positions:

- What are the responsibilities regarding resident and medical student teaching and mentoring?
- Is protected time available for personal academic pursuits?
- Is there a tenure track?
- What are the criteria for academic promotion?
- Does the chairperson encourage faculty development?
- Do all faculty members have private workspaces, personal computers, and Internet access?
- What statistical and secretarial support can be expected?
- What is my attendance requirement for resident journal clubs and conferences?
- How are clinical responsibilities shared with specialty services, especially trauma?

### AT THE END OF THE DAY, WHAT REALLY MATTERS MOST WHEN CHOOSING YOUR EM CAREER?

A 1989 survey of EPs in 24 Los Angeles area private, public and university hospitals revealed the three greatest sources of physician satisfaction were proficient use of skills, variety and excitement of cases, and being a member of an effective team.<sup>4</sup> Major stresses reported by EPs were patient load, interaction with patients and families, and lack of administrative support.

A study of EM residency graduates between 1978-1988 demonstrated that those remaining in EM reported higher reimbursement, were board certified, and did not train in another specialty outside of EM.<sup>7</sup> Attrition from EM practice for these residency-trained EPs was under 1% per year.

Ultimately, your final decision to choose an academic or a community job is unlikely to be the most important factor shaping job satisfaction. Instead, the specifics of a particular institutional culture will most likely determine happiness.

### References:

- 1) Stern SA, Kim HM, Neacy K, Dronen SC, Mertz M. The impact of environmental factors on emergency medicine resident career choice. *Acad Emerg Med.* 1999;6:262-70.
- 2) Sanders AB, Fulginiti JV, Witzke DB, Bangs KA. Characteristics influencing career decisions of academic and nonacademic emergency physicians. *Ann Emerg Med.* 1994;23:81-7.
- 3) Sanders AB, Fulginiti JV, Witzke DB. Factors influencing resident career choices in emergency medicine. 1992;21:47-52.
- 4) Keller KL, Koenig WJ. Sources of stress and satisfaction in emergency practice. *J Emerg Med.* 1989;7:293-9.
- 5) Neacy K, Stern SA, Kim HM, Dronen SC. Resident perception of academic skills training and impact on academic career choice. *Acad Emerg Med.* 2000;7:1408-15.
- 6) Kazzi A, Patterson S, Langdorf M, and Young G. The CAL/ACEP Workforce Taskforce Registry: Physician administrators and equitability of distribution of undesirable shifts. *Ann Emerg Med.* 2000;36:5-9.
- 7) Hall KN, Wakeman MA. Residency-trained emergency physicians: their demographics, practice evolution, and attrition from emergency medicine. *J Emerg Med.* 2000;18:259-60.



## 25

Non-Traditional  
Careers in Emergency  
Medicine

## RESIDENT AUTHOR:

Scott Matthew Zelasko, MS-IV (MCP/Hahnemann University)

## FACULTY AUTHOR:

William K. Mallon, MD, FAAEM, FACEP (University of Southern California)

## FACULTY EDITOR:

Joe Lex, MD, FAAEM, FACEP (Chair, AAEM Education Committee / Chestnut Hill Hospital, Philadelphia)

## INTRODUCTION

As the most recent specialty to join the ranks of medical specialties, Emergency Medicine (EM) struggled to define itself. A primary challenge was to define the unique set of skills and the specific body of knowledge essential to justify yet another specialty. Part of this process required EM to adopt some areas that had been "orphaned" by the other medical specialties into its scope of practice in addition to the classic medical topics. Since the victims of many of these orphaned areas frequently ended up in the Emergency Department (ED) or being dealt with by the prehospital Emergency Medical System (EMS), it was only logical that EM would welcome them. Thus, we integrated toxicology, hyperbaric medicine, travel and cruise-ship medicine, tropical medicine, wilderness medicine, and other areas of particular interest into our fold. Our specialty matured and we became the ultimate generalists, with a focus on emergent care and high-acuity disease.

From an alternative career standpoint, this results in diversity. Any emergency physician (EP) who starts with the traditional EM residency can then choose a specific area of focus and create a nontraditional career. There are many avenues that a physician can follow to step out of the traditional "pit doc" role. The alternative career EP can continue to "do a few shifts" and maintain a fixed income while exploring options. Most other specialties do not allow this opportunity.

EM is a young specialty. EPs are just now filling roles long taken for granted in other specialties. For example, medical photography, illustration, and publishing are only recently being recognized in our field. EM is gaining access to previously unknown positions, such as the Dean's office, Graduate Medical Education, and other areas of medical education. Many medical schools still lack a Department of Emergency Medicine (DEM), which indicates an ongoing opportunity for further expansion.

### SPECIAL SKILLS AND TRAINING

In many cases, an alternative career is based on a physician's previously established special skills, interests and expertise. These skills may come from training or experience. They can be medical or non-medical. They can be "fused" with or parallel to an EM practice.

Accreditation Council for Graduate Medical Education (ACGME) fellowships are dealt with elsewhere in this text, so this chapter will focus on "other" types of training, both undergraduate and postgraduate. The range of possibilities is enormous – a veritable spice rack to flavor an alternative career.

Table 1 is a partial list of special training and skills that provide a platform from which to launch an alternative career. Career opportunities exist for each skill set. All of the special skills listed would be welcome in a University setting; academics and research can be an alternative career choice for all of the listed areas. Some careers already exist, but others require an individual to create the job, rather than find an existing position. Sometimes the single biggest obstacle is investing the creative energy and the time to mold a rewarding career.

### EXAMPLES OF NON-ACGME APPROVED FELLOWSHIPS AND ALTERNATIVE CAREERS

#### Wilderness Medicine:

Bites and stings, survival in the wilderness, assembling survival kits, identifying edible plants, search and rescue missions, white water rescue missions, avalanche route finding, recreational injuries and injury patterns, wilderness injury prevention, National Park medical staffing, and evacuation of patients by fixed wing and helicopter are part of wilderness medicine. Specific medical problems, unpredictable climate, and unfriendly terrain present unique challenges both to on-scene care providers and later definitive care providers. The training almost always requires specialization to the specific wilderness area being contemplated. Many United States National Parks have medical staffs with wilderness medicine expertise, including Yosemite, Yellowstone, and Grand Teton National Parks.

#### Cruise Ship Medicine:

When 1,000 people are living on a boat for two weeks, their mean age is 60, and they are drinking and eating to excess, you can expect them to have medical problems. EPs have the ideal training for this type of practice. The American College of Emergency Physicians (ACEP) even has a Cruise Ship Medicine Section. Part of the job involves decisions about patient evacuation, either immediately by helicopter or at the next port of call, since definitive care for surgical problems, MIs, and many other medical conditions can only be obtained in a hospital. However, on-board medical capabilities for the large cruise ships

are often quite impressive and come close to duplicating a hospital ED. Cruise ship physicians may be independent contractors or employees of the cruise ship line.

#### Forensic EM:

Recognizing and gathering legal evidence in an ED requires special knowledge and skills. When someone is shot, stabbed, assaulted, or abused, the crime scene moves to the ED with the victim. Information gathered in the ED can be essential to either the prosecution or the defense. In many countries a "police surgeon" (often not a surgeon) functions as coroner, investigator, and expert witness. In the United States, fellowships are now being developed which teach the Forensic EM specialist how to present medical facts in the legal arena. Correctional medicine (care of inmates) may or may not be part of the job. Fees paid for serving as an expert witness can generate a significant income.

#### International Emergency Medicine (IEM):

There are many organizations that can help an EP get into international and relief medicine. The Red Cross, the Peace Corp, Doctors Without Borders (Médecins Sans Frontières), the International Medical Corp (IMC), and Emergency Medicine International (EMI) can all provide access to international EM opportunities. Missionary medicine, with organizations such as the Church of Later Day Saints, also provides international opportunities for physicians. While at medical school interview time it seems that every student wants this career, few ultimately pursue it. Some obstacles are language skills, prolonged travel, and the relative comfort and stability of a house with a mortgage and a family. Income is usually minimal, and many positions in these organizations are strictly voluntary. Disaster medicine may or may not be the focus of IEM.

#### Travel Medicine:

Travel Medicine, Expedition Medicine, Tropical Medicine, and Emporiatrics are all slightly different but related. A detailed knowledge of disease risks, vectors, and immunizations is essential for them all. Courses in Tropical Medicine and Hygiene are taught in more than a dozen schools around the world (e.g., the Lordan School of Tropical Medicine). See <http://info.dom.uab.edu/gorgas/geomed/links.html> for a listing. Some institutions offer a certificate as part of a Masters program. Specific courses include Tropical Medicine, Diseases of the Jungle, and Diseases of High Altitude. For example, one such program is provided by the Gorgas Memorial Institute at the University of Alabama at Birmingham, in conjunction with UPCH Tropical Medical Institute in Lima, Peru. Through some additional training, EPs can pursue career avenues along these lines. This training can be useful for IEM as well.

#### Advanced Degrees:

The EP who has a second advanced degree has some relatively obvious non-

traditional job opportunities. As shown in Table 1, an MD can be combined with a Masters of Public Health, Masters of Business Administration, or Masters of Hospital Administration to provide a powerful career adjunct. Some schools now offer these degrees simultaneously with their MD program. The MD-JD combination is possessed by fewer than 1,500 people in the country and provides access to careers in forensic medicine, medical malpractice, patent law, legislation and new health law, and politics.

#### Dual Board Status:

Many EPs seek a nontraditional job by being dual-boarded. Board certification in Occupational Medicine, Internal Medicine, Anesthesia, and others can create powerful consulting capabilities that become a career. Dual-boarded individuals usually pursue careers in *academics* (see Chapter 24) where they may have dual departmental appointments.

#### Entrepreneurial Ventures:

Many EPs, with or without an MBA, create a business that becomes their alternative career. Investment capital may be needed, as well as research, partners, and a variety of other skills.

1. **Billing Companies:** Tailored to EM, with a focus on reimbursement, coding, fraud risk assessment, and sometimes Q/A. Computer training, an MBA, or a degree in medical informatics might assist such a career.
2. **Publishing House:** Publishing, editing, and selling medical texts, or on-line texts.
3. **CME Venture:** Graduate Medical Education with approved CME credit can be a business venture. Teaching ACLS, PALS, ATLS, etc., to medical staffs, can be a part of this enterprise as well, using merit badge needs to create a business.
4. **Medical Inventor:** EM has numerous widgets, gadgets, and gizmos that have been invented, patented, and sold. A background in biomechanical engineering, chemistry, or physics would improve access to this type of career.
5. **Telemedicine:** Telemedicine consultation services, which are usually linked with a university, are springing up. Computer knowledge and access to other specialists are essential.
6. **EM Design:** The ergonomics of an ED and the functionality of its workspace are evolving design concepts. ED work experience and architectural skills would be an ideal background for this niche. Serving as a consultant to design firms is another possibility.
7. **Medical Illustration:** While Frank Netter has become an icon, there are other important medical illustration jobs in EM. Computer graph-



ics, art, and talent for illustration are key components.

8. **Website Consultant:** EDs, in both academic and community settings need websites to provide information, enhance services, and create revenue. Computer skills, Website design skills, and programming backgrounds are helpful.

### SUMMARY

EM provides access to an enormous array of career possibilities, many of which are non-traditional. Many EPs start as a "Jack-of-all-trades," but then focus on an area that is particularly interesting and has career potential. This special interest then becomes a lifelong passion. Whether that interest is rock-climbing, diving, counter-terrorism or international travel, the house of EM offers many opportunities to turn a life interest into a career.

# APPENDIX

## TABLE I

### ACGME-APPROVED FELLOWSHIPS / PGY 4-5 AND UP

1. Medical Toxicology  
(See Chapter 23: Fellowships and Subspecialty Certification)
2. Pediatric Emergency Medicine
3. Undersea Medicine/HBO
4. Sports Medicine

### NON-ACGME-APPROVED FELLOWSHIPS / PGY 4-5 AND UP

5. EMS  
(Hazardous Materials, Urban Search and Rescue, Disaster Medicine)
6. WMS/Expedition Medicine
7. International EM
8. Research Fellowship
9. Forensic EM
10. EM Ultrasound
11. Cruise Ship Medicine
12. Space Medicine (High Altitude/Low Gravity Science)
13. Emporiiatrics Travel Medicine  
(usually a healthy portion of Tropical Medicine)

### ADVANCED DEGREES

1. MD-MPH (Injury and Preventive Medicine)
2. MD-MBA
3. MD-MHA
4. MD-Ph.D.
5. MD-Pharm D.
6. MD-Masters of Medical Education
7. MD-Tropical Medicine
8. MD-J.D.
9. MD-Medical Informatics

### DUAL BOARDED STATUS

1. Internal Medicine - EM ("EM/IM")
  - Cardiology
  - Infectious Disease
  - Other especially Critical Care/Pulmonary
2. Pediatrics - EM ("Peds/EM")
  - Different from Pediatric EM fellowship.
  - Peds/EM provides a Primary board status in both fields.

3. Pathology - EM
4. Anesthesia - EM
5. Occupational Medicine - EM
6. Radiology - EM
7. "Other" + EM

#### BACHELORS DEGREES

1. Engineering; Bio-Engineering
2. Physics; Physics and Physiology
3. Chemistry; Biochemistry
4. English
5. Banking
6. Philosophy
7. Religion
8. History
9. Architecture
10. RN
11. Sociology
12. Business
13. Photography
14. Art/Illustration
15. Marine Biology
16. Computer Science (programming)
17. Other

#### CULTURAL PLATFORMS

1. Language Skills
2. "Regional" Degrees i.e., "African Studies"

#### MILITARY/POLICE

1. Bioterrorism
2. Tropical Medicine with Military Focus
3. Toxicology with Military Focus
4. Space Medicine
5. Flight Surgeon
6. General Medical Officer
7. MASH (Mobile Army Surgical Hospital)
8. Police Surgeon (Forensics)
9. Correctional Medicine



## 26

Urban Versus Rural  
Practice in Emergency  
Medicine

## RESIDENT AUTHOR:

Henderson D. McGinnis, MD (Marshall University School of Medicine, Wake Forest University, North Carolina)

## FACULTY AUTHOR:

Barbara Katz, BA (President, the Katz Company, Inc.)

## FACULTY EDITOR:

Joe Lex, MD, FAAEM, FACEP (Chair, AAEM Education Committee / Chestnut Hill Hospital, Philadelphia)

## INTRODUCTION

Do not let the stereotypes lead you astray. An urban Emergency Department (ED) is not always a large teaching institution swarming with residents and medical students, all dealing with exotic illnesses and multiple gunshot wounds while hundreds of indigent patients in various levels of alcohol-induced haze sleep in the waiting room. On the other hand, a rural ED is not likely to be a tin-roofed shack where patients bring you poultry as payment for professional services.

EDs are different from one another just as hospitals are different, but there are similarities among them based on whether they are situated in urban or rural areas. One useful way to evaluate urban versus rural Emergency Medicine (EM) is to compare the three categories that generally make up a job description: *practice*, *lifestyle* and *compensation*.

There is little data in the literature comparing the urban to the rural profile, for the practice of EM. National EM organizations have expressed concerns pertaining to the provision of readily available qualified emergency physicians (EPs) in rural areas. Some are discussing the need for specialized training in rural areas, while others have formed taskforces to address EM in the rural setting, while others have promoted the rise of leadership from rural EDs and states among its ranks. This chapter provides data when it is available. However, much of the information contained in this chapter comes from the faculty author's experience as an EP recruiter for rural hospitals as well as the faculty editor's own 20 year history practicing in rural community hospitals. As a recruiter, the faculty author has defined and been exposed to thousands of position specifications from all over the rural and urban United States, amassed over the past 12 years. For a decade, she has also conducted regional and national surveys to define the practice, board certification, and compensation profile for EPs in the USA. Last but not least, this chapter provides informa-

tion that was provided by the Center for Rural Emergency Medicine at the West Virginia University Medical Center. We wish to acknowledge Dr. Rick Blum and Dr. J. Williams for their assistance with this regard.

### PRACTICE: URBAN

Unlike rural hospitals, which tend to be small, urban medical centers and hospitals run the gamut in size. For example, in the city of San Diego, California, with a population of 1.2 million, there are eight medical-surgical hospitals, all with 24-hour EDs. They include a 485-bed university medical center, one 169-bed Veteran's Administration (VA) hospital and one 319-bed Naval medical center. The other five hospitals range in size from 70 to 488 beds, and some are smaller non-teaching community hospitals. Most, if not all, have up-to-date technology and diagnostic equipment, and all have magnetic resonance imaging devices (MRIs) and computerized tomography units (CT scanners).<sup>1</sup>

Contrast this with the city of Baltimore, Maryland. With only 700,000 people, Baltimore has 14 medical-surgical hospitals, all of which run EDs. Two of these are university medical centers and one is a VA hospital. Baltimore EDs see 18,000 to 50,000 patients yearly.<sup>1</sup> Larger cities such as Los Angeles and Atlanta have EDs that handle over 200,000 patients per year. The two university hospitals in Baltimore feature the status of "*Level I* Trauma Center." In addition, five other city hospitals are designated as "Trauma Centers." In other words, half of Baltimore's EDs meet the requirements to handle trauma and to qualify for Trauma Center designation. Urban America has a concentration of trauma centers you will not find in suburban or rural areas.

Moorehead et al's 1999 workforce study surveyed 940 hospitals with 6,719 EPs who included 2,761 (54%) practicing in urban, 1,079 (21%) in suburban, and 1310 (25%) in rural hospitals. Of this group of over 6,700 EPs, 62% were residency-trained in EM and 58% were board-certified in the specialty. Compared to rural EDs, urban EDs had a higher number of EM residency-trained or board-certified EPs, especially in the trauma and teaching centers.<sup>2-4</sup> Large urban hospitals also attract a great number of indigent and homeless patients, particularly if the facility is city-owned or county-supported. Bellevue Hospital ED, which is run by the city of New York, sees more than 110,000 patients every year, with nearly one-third of them being uninsured.<sup>5</sup> You can also plan on seeing a high number of HIV-positive patients, drug and alcohol abusers, psychiatric patients, and victims of penetrating trauma.

The average urban ED sees a wide range of patient pathology, from the common sore throat to simultaneous multiple victims of penetrating trauma. Urban facilities also have a large number of highly trained specialists and sub-specialists on staff and available for consult. The ED is supported by special trauma teams, full-time medical technicians, physician extenders [i.e. Physician Assis-

tants (PAs) and Nurse Practitioners (NPs)], certified emergency nurses (CENs), residents, and medical students. Because of this strong support system, the EP can concentrate more on single tasks and focus on direct patient care.

Although a large number of urban indigent patients use the ED as a source for primary care, most provide a medical screening exam either through nursing triage or a physician assessment which then diverts these patients to outpatient or off-site clinics.

The urban hospital EP sees an average of 2.3 patients per hour, but this can increase to 4 patients per hour or more during peak busy periods.<sup>6</sup> Because of the high intensity of serious pathology seen in most urban EDs, work shifts are seldom longer than ten hours, though some twelve-hour overnight shifts can still be found.<sup>6</sup> A full-time EP in an urban ED works an average of 36 hours per week.<sup>6</sup>

Most EPs feel overwhelmed by documentation and paperwork, but most urban hospitals have a fully computerized dictation and tracking system to ease this burden.<sup>6</sup> Working as an EP in an urban ED is an intensive job that can leave little time for extracurricular professional activities. Urban teaching institutions can provide their faculty with "protected" non-clinical time for teaching and research. While patients in urban EDs are not known for expressing their appreciation, the occasional "Thank you" does occur. Although practicing EM in a large urban setting usually means being "a little fish in a big pond," it is where the action is for a large number of EM residency graduates.

In short, the urban ED is a busy place where almost anything can and will happen, but where staff members are eager to meet any challenge thrown at them. If you want to be on the "cutting edge" of EM, an urban hospital ED will almost certainly meet your needs.

### PRACTICE: RURAL

Hospitals in rural America are considerably smaller. Some have as few as ten licensed beds, although the average is about 70 beds.<sup>3</sup> Some small hospitals have EDs that are open only ten or twelve hours a day and are staffed by local primary care physicians on a rotating basis.<sup>7</sup> Many of these small hospitals have rudimentary services, with only basic radiography and medical/surgical services. A significant number, however, have 24-hour EDs and some even qualify as "Regional Referral Centers," with technology similar to that seen in urban areas.

Annual patient volumes can be as low as 6,000 visits annually, and average about 15,000. Rural hospitals see far less trauma than urban centers, and few rural hospitals are designated as trauma centers.<sup>7</sup> But in many cases, the rural hospital is the only comprehensive medical facility within 100 miles. Since few medical and surgical sub-specialists are available for consultation, rural EPs

may do a large amount of patient stabilization for transport to a large medical center many miles away. Rural hospitals tend to see a higher number of primary care and low-acuity patients.<sup>8</sup> Because of the lack of specialty children's centers, there are also more pediatric patients.<sup>8</sup>

Many EPs in rural practice believe one of the best benefits is being able to spend more time with individual patients, due to the lower volume, often fewer than 2 patients per hour.<sup>6-8</sup> Rural EPs usually work a 12-hour shift, and in some EDs can work 24-hour shifts, completing a 48-hour workweek in two days. The average workweek, however, is 40-42 hours.<sup>6-8</sup>

Quite a few residency-trained EPs who practice in rural areas continue to "moonlight" at a regional trauma center in order to keep up their clinical skills. While this requires travel, it allows them to work with the physicians who receive their transported patients, and to consult with peer-group colleagues. Rural EPs also have a smaller support staff, often working with just a single nurse and/or physician extender.<sup>8</sup> There are no trauma teams, technicians or residents, so the EP is independently managing more of the details, including central IV lines, chest tubes, casts, difficult airways, etc. Since there are few formal triage systems in rural EDs, prioritization occurs as patients present.<sup>8</sup>

Rural EPs must be capable of multi-tasking. They often oversee the Emergency Medical Services (EMS) for their area, handle off-floor codes during night shifts, sit on various hospital and regional committees, and donate hours to off-site clinics. The rural EP tends to find more time for other professional activities, and has high visibility in the area's community. The patients also tend to be more appreciative of the care they are given, and "Thank you" is very common.

Computerization is less common in the rural ED, and EPs frequently have to hand-write their charts and other paperwork.<sup>8</sup> However, this is changing with the ready availability of affordable template charting and dictation systems.

Some practice statistics for rural EPs were gathered from rural hospitals in West Virginia.<sup>3</sup> Surveys showed that only 7.5% of full-time EPs were residency trained in EM (as were 4% of part-time physicians).<sup>3</sup> Only 12% of the full-time EPs were board-certified in EM. At least one-third of the full-time EPs and a majority of the part-time EPs had passed no specialty board.<sup>3</sup> These statistics probably apply to other rural areas as well. Since most EM residency training programs are located in urban medical centers, some people question whether they provide adequate training for a career in rural EM. According to researchers from the Center for Rural Emergency Medicine at the West Virginia University Medical Center, the clinical training that EM residents receive is more than adequate for a rural hospital. After all, a patient run over by a tractor will have the same presentation as a patient run over by a taxi. The real difference



is in the culture of the rural ED: EPs must be able to function effectively in a single-coverage environment without full specialty backup and with less equipment and staff, carrying the full responsibility for prioritization, diagnosis and treatment as well as admission, discharge or transfer. Residency programs do not necessarily provide such an exposure to residents by the time they complete their training.

If you want to spend time with your patients, perform procedures routinely, and enjoy higher recognition in the local medical community, a job at a rural ED might be right for you.

## LIFESTYLE

No one would ever confuse the lifestyle of urban America with that of rural America. If you practice in the city, you will unquestionably have a higher cost of living than if you live in the country. For the same amount you might invest in a big-city condominium or townhouse, or a suburban "starter" home, you could probably purchase several acres of countryside land. If you are not the "wide-open spaces" type, you can also find an up-scale suburban home or an historical older home in a quaint small town.

An urban location means close proximity to the arts, cultural amenities, professional sports teams, fashionable restaurants, and the day-to-day hubbub of big city living. Colleges and universities tend to be nearby, as well as a choice of public and private schools. Large cities also serve as transportation hubs, so the airport and train station are nearby. They also are more tolerant of alternative lifestyles, and offer places of worship for just about any religion being practiced.

The rural location generally appeals more to the outdoor types. Many of these rural areas are within an hour or two drive of a large city, so the urban services are available from a distance. The school systems can be great, poor, or anywhere in between. Shopping can be a burden, with several hours set aside for travel to and from stores. Places of worship for any religion other than the Christian faiths may be few and far between, and alternative lifestyles are not well tolerated.

Being hired by an urban hospital is pretty standard fare: you submit a CV, undergo interviews, and generally are wined and dined at a lunch or dinner. The community infrastructure has no part in the recruitment. There are rarely financial incentives other than your salary, which we shall discuss later.

You might say, "It takes a village" to hire a doctor in rural America. The entire business community may get involved, and prospective staff physicians may be offered no-or-low-cost mortgages, low-cost furnishings, and other discounts from local merchants. Some hospitals may even offer to pay off your loans over the period of time you have committed to the region. Because the

Federal Government does not recognize EM as a primary care specialty, no loan forgiveness programs are currently available at either the state or federal level. Rural hospitals know that the payer mix and income from salaries and professional charges is relatively lower than in urban areas. They accordingly realize the great attraction that a loan payoff can be to a young physician with significant debt load, particularly one with a young family, and often attempt to provide such a plan for interested physicians.

## COMPENSATION

In 2001-2002, the national average salary for an urban-based hospital-employed full-time attending physician (1,872 hours) fresh out of residency is from \$160,000 to \$175,000, depending on your location.<sup>9</sup> Texas and Louisiana are the highest paying areas, followed closely by the midwestern states where entry-level salaries usually top \$200,000.<sup>10</sup> Next highest is in the southeastern and northeastern United States, where entry-level salaries for graduating residents average \$180,000 to \$185,000.<sup>10</sup> The western part of the country and the mid-Atlantic states are where the lowest salaries are found, averaging \$150,000 to \$165,000.<sup>10</sup> Rural hospitals pay somewhat less, and the starting salary can range between \$136,000 and \$177,000 for 2,100 hours per year.<sup>10</sup>

Benefits for both locations are about the same - medical, dental, and disability coverage. Malpractice coverage is also provided. Paid time-off, including vacation, Continuing Medical Education (CME) attendance and sick leave, is usually 4 weeks annually in the city hospitals, and 6 weeks per year in the rural setting. As a hospital employee, you would also be eligible for pension and retirement plans. Urban areas tend to have a higher concentration of small, democratic, private groups, while in rural areas there may be a predominance of national contract group positions.

## CONCLUSION

EM positions in urban areas provide a busy work environment, typically with a wide range of patient pathology and a strong multi-specialty backup network, along with opportunities for academic involvement and a high ratio of peer colleagues.

Rural EM positions provide a slower work environment with a higher ratio of primary care pathology, lower acuity, and limited support, but an opportunity to spend more time with individual patient and develop more of a "hands-on" clinical practice. Some physicians even can pursue other major interests due to a two-day workweek.

Unfortunately most rural hospitals lack the patient payer mix to support salaries earned by the residency-trained EPs. As a result, these hospitals may utilize a local primary care group to staff the EDs, or bring in a large contract

group in order to provide full-time coverage. The small number of rural hospitals that attempt to attract board-certified EM specialists may go “the extra mile” to make their situation seem attractive.

While EDs in big-city hospitals rarely have difficulty in attracting residency-trained EPs, the need for such well-trained EPs in urban EDs continues due to the persistent rise in the number of ED patient visits.

Both urban and rural hospital and personal environments have a lot to offer to EPs. Each has its own benefits and pitfalls. Physicians should each determine their own professional, personal and family goals, needs and aspirations, decide which lifestyle and setting matches those best, and then make their choices accordingly.

#### References:

- 1) American Hospital Association Guide, 2001-2002 Edition.
- 2) Moorhead JC, Gallery ME, Hirshkorn C, et al. A study of the workforce in emergency medicine 1999. *Ann Emerg Med.* 2002;40:3-15.
- 3) McGirr J, Williams JM, Prescott JE. Physicians in rural West Virginia emergency departments: Residency training and board certification status. *Acad Emerg Med.* 1998;5:333-6.
- 4) Haase CE, Lewis LM, Kao B. Do estimates of emergency medicine workforce underestimate current needs? *Annals Emerg Med.* 1996;28:666-670.
- 5) Finklestein, KE. Bellevue's emergency. *New York Times Magazine.* February, 1996:11.
- 6) Katz B. Based on 12 years experience recruiting EPs for urban EDs in the US.
- 7) Williams J, MD. West Virginia University Center for Rural Emergency Medicine. Personal interview.
- 8) Blum R, MD. West Virginia University Center for Rural Emergency Medicine. Personal interview.
- 9) Katz B. The Emergency Medicine Marketplace for 2001/2. *Emergency Physicians Monthly.* September 2001.
- 10) Katz B. The Emergency Medicine Marketplace for 2002/3. *Emergency Physicians Monthly.* September 2002.



## 27

Ultrasonography in  
Emergency Medicine

## FELLOW AUTHOR:

J. Christian Fox, MD, RDMS, FAAEM (Christ Hospital, Illinois / University of California, Irvine)

## FACULTY AUTHOR:

Michael J. Lambert, MD, RDMS, FAAEM (University of Illinois / Resurrection Medical Center, Chicago)

## FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Louisiana State University, New Orleans)

Emergency physicians (EPs) around the world are now appreciating the value of diagnostic ultrasound as a bedside imaging modality. The "magic wand" with its ability to peer into the body and confirm suspected pathology or divulge hidden ones has forever altered the management of medical emergencies. Senior EPs and emergency medicine (EM) residents alike are seeking avenues to develop and hone their ultrasound skills. Medical students are zealously seeking out EM residency programs that provide ultrasound training. Last year the second most popular question asked by medical students on the interview trail concerned ultrasound in the emergency department (ED), although exposure to ultrasound is just the tip of the iceberg when it comes to competency! Just as other medical specialties have benefited from ultrasound, EM is poised to take full advantage of this skill. This rapid imaging modality is inherently useful in a specialty whose mission is to swiftly recognize patients with life-threatening illnesses in order to provide prompt and adequate care.

Emergency ultrasound quietly originated in the early 1980s, as early pioneers recognized its value in the acute care setting. The role of emergency ultrasound has gradually been delineated, with applications found in numerous areas, including ectopic pregnancies, abdominal aortic aneurysms, pericardial effusions and intraperitoneal bleeding.<sup>1,2,3,4</sup> Unfortunately, controversy began when radiologists voiced concerns about quality of care and duplication of services.<sup>1</sup> Only recently has this battle begun to calm down with radiologists and EPs figuring out that they can provide emergency ultrasonography in harmony in order to provide optimal emergency care to ED patients. The American College of Emergency Physicians successfully lobbied the American Medical Association to pass a resolution that placed the decision of *who* is credentialed to perform ultrasound in the hands of each hospital's credentialing committee.<sup>1</sup> With no specific specialty governing the practice of emergency ultrasound, the turf battle technically ended within the *House of Medicine*, and EPs were

left to prove their proficiency to hospitals' credentialing committees.

Ultrasound interest groups and committees in EM organizations (SAEM, AAEM and ACEP) are currently developing guidelines for the specific training necessary for proficiency. Because most physicians did not receive formal ultrasound training during their residency, such recommendations are expected to direct much of the future in emergency ultrasound credentialing. The American Institute of Ultrasound in Medicine recommends that non-radiologists complete at least 150 hours of didactic coursework and perform 300 proctored ultrasounds in order for them to be credentialed.<sup>1</sup> These criteria far exceed any current recommendations circulating among EM circles, but could certainly be achieved during residency.

Competency in emergency ultrasound requires the time-honored approach of performing numerous bedside scans. However, these scans must be reviewed or "over-read" for accuracy. Because the field of emergency ultrasound is relatively young, most residency programs lack formal directorships of ultrasound, and many programs work with radiologists to over-read the scans. This problem will ultimately lessen as more EPs become proficient in emergency ultrasound. Performing an ultrasound and obtaining an adequate image is an art form requiring hours of hands-on experience. Bedside guidance while the probe is on the patient demonstrates the technical and motor components of performing an ultrasound. The EP scans in real-time, clinically directing the transducer to the pathology, with the patient providing feedback. This is a unique form of ultrasound, a true extension of the physical examination, requiring close supervision to achieve mastery. Image interpretation can be taught either at the bedside, or off-line through video tape review. While coursework and unsupervised scanning are great starting points, the analysis of real-time video footage provides the highest yield for teaching emergency ultrasound. Furthermore, video clips or still images can be digitized and edited to point out landmarks or important teaching caveats. These images can then be sent electronically to the physician who performed the ultrasound or to an entire group.<sup>1</sup>

Eventually ultrasound will be integrated into every EP's practice. There are many areas where emergency ultrasound has already been clearly demonstrated to change outcomes in patients with a life-threatening condition. For example patients who have an abdominal aortic aneurysm presenting to the emergency department can be difficult to diagnose. Symptoms are often vague and non-specific. Emergency ultrasound expedites decision-making in these patients, and is faster than any other test available. Another example is the unstable blunt trauma patient with hemoperitoneum requiring emergency laparotomy. In most cases ultrasound has been shown to be as accurate as a diagnostic peritoneal lavage without the complications, and results are obtained in a frac-

tion of the time.<sup>1</sup>

In summary, the quality of emergency ultrasound training should be considered when evaluating and ranking EM residency programs. As residency programs across the country integrate formal ultrasound training into their programs, uniformity in training is ultimately expected. Furthermore as technology advances, high quality ultrasound machines are becoming more portable and less expensive. This will undoubtedly solidify ultrasound in the armamentarium we use to help our patients.

**Table 1: Emergency Ultrasound Applications**

<b>I. Pelvic ultrasound</b>
<ul style="list-style-type: none"> <li>a. Ovarian cysts</li> <li>b. Ovarian torsion</li> <li>c. Intrauterine pregnancy</li> <li>d. Ectopic pregnancy</li> <li>e. Tubo-ovarian abscess</li> <li>f. Pelvic free fluid</li> <li>g. Pelvic masses</li> </ul>
<b>II. Abdominal ultrasound</b>
<ul style="list-style-type: none"> <li>a. Hydronephrosis</li> <li>b. Nephrolithiasis</li> <li>c. Gallstones</li> <li>d. Abdominal masses</li> <li>e. Ascites</li> </ul>
<b>III. Vascular</b>
<ul style="list-style-type: none"> <li>a. Deep vein thrombosis</li> <li>b. Central or peripheral line placement</li> <li>c. Abdominal Aortic Aneurysm</li> <li>d. Measurement of JVP</li> </ul>
<b>IV. Trauma</b>
<ul style="list-style-type: none"> <li>a. Hemoperitoneum</li> <li>b. Hemothorax</li> <li>c. Hemopericardium</li> </ul>

Table 1: Emergency Ultrasound Applications

V. Cardiac
a. Asystole b. Pericardial effusion c. Hypo or hyperkinesis
VI. Procedure guidance
a. Pericardiocentesis b. Paracentesis c. Thoracentesis d. Abscess localization and drainage e. Foreign body removal f. Fracture reduction g. Confirmation of intubation
VII. Testicular
a. Torsion b. Epididymo-orchitis c. Masses
VIII. Ocular
a. Retinal detachment b. Retrobulbar hematoma c. Vitreous hemorrhage d. Central retinal arterial and venous occlusion

References:

1) Mateer JR, Valley VT, Aiman EJ, Phelan MB, Thoma ME, Kefer MP. Outcome analysis of a protocol including bedside endovaginal sonography in patients at risk for ectopic pregnancy. *Ann Emerg Med.* 1996;27:283-289.

2) Kuhn M, Bonnin RL, Davey MJ, Rowland JL, Langlois SL. Emergency department ultrasound scanning for abdominal aortic aneurysm: accessible, accurate, and advantageous. *Ann Emerg Med.* 2000;36:219-223.

3) Plummer D, Brunette D, Asinger R, Ruiz E. Emergency department echocardiography improves outcome in penetration cardiac injury. *Ann Emerg Med.* 1992;21:709-712.

4) Porter RS, Nester BA, Dalsey WC, et. al. Use of ultrasound to determine need for laparotomy in trauma patients. *Ann Emerg Med.* 1997;29:323-330.

5) Zegel HG, Chong WK, Pasto ME, Sagerman J, Tsai FY. US in the emergency department: our experience and proposed resolution of a conflict between emergency medicine and academic radiology. *Acad Radiol.* 1999;6:592-598.



## Appendix A:

AAEM policy on ultrasound can be found at:

<http://www.aaem.org> under position statements

ACEP policy on ultrasound can be found at: <http://acep.org/1,4542,0.html?ext=.pdf>

SAEM policy on ultrasound can be found at: <http://www.saem.org/publicat/ultrasou.htm>

## Appendix B:

### AAEM Position Statement on the Performance of Emergency Screening Ultrasound Examinations (Adopted February 1999)

#### Definition

An Emergency Screening Ultrasound Examination (ESUE) is a sonographic imaging procedure performed by an emergency physician on a patient in the emergency department in an effort to detect acute medical problems.

#### Purpose

The purpose of obtaining this sonographic information would be to expedite patient diagnosis, treatment, or flow in the emergency department.

#### Position Statement

The following statements reflect AAEM's position on ESUEs:

1. The skills necessary to perform an ESUE can be learned by emergency physicians.
2. The ability to rapidly evaluate multiple organ systems noninvasively makes ultrasound a valuable diagnostic tool for emergency physicians.
3. The application of ESUEs may include:
  - a. Any clinical situation in which a potential life-or organ-threatening emergency might be diagnosed in a timely manner.
  - b. Any clinical situation in which traditional ultrasound or other gold standard diagnostic study performed in the radiology department is significantly delayed.
4. Emergency physicians may be credentialed in the use of ESUEs. Experts in the field of emergency ultrasonography should establish the credentialing criteria. The ability to incorporate ultrasonography into the practice of Emergency Medicine should be based on these established credentials.
5. The core curriculum of Emergency Medicine residency programs should include training in performing and interpreting ESUEs.
6. Emergency ultrasound research is imperative to define specific settings in which ultrasound is best utilized by emergency physicians.
7. Firmly incorporated continuing medical education should be readily available for emergency ultrasonography.
8. Continuous quality improvement should be established in each institution to ensure safety and performance of equipment, along with supervision of physician technical skills and interpretation of ultrasound images.

## 28

Formal Management  
Training in Emergency  
Medicine

## RESIDENT AUTHOR:

Jesse Pines, MD, MBA (University of Virginia Health Sciences)

## FACULTY AUTHOR:

Margaret O'Leary, MD, MBA, FAAEM (The MBA Programs, Benedictine University, Illinois)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (West Suburban Health Care, Illinois/ Rush/ Cook County Hospital, Chicago)

## INTRODUCTION

Medical school and residency prepares physicians very well to be clinicians but does not offer significant exposure to business issues. Because of this, many residency graduates find themselves overwhelmed or poorly prepared when entering the competitive marketplace. Basic business training in areas, such as health law, policy, and economics, as well as operations, marketing and financial management, enhances physicians' ability to understand and function more effectively. Formal business training not only prepares physicians to compete effectively but also opens up attractive opportunities in health care management, research, biotechnology, and consulting.

The physicians working in an emergency department (ED) can naturally take an organizational leadership role in managing hospitals and resources.<sup>1</sup> While it has never formally been measured, emergency medicine (EM) is known for attracting and training physicians who are naturally good managers. Seasoned emergency physicians (EPs) understand organizational systems and the importance of teamwork in achieving desirable outcomes for patients, colleagues, and organizations. EPs interact daily with virtually every medical specialty and need to possess expertise in interpersonal communication.

Many of the skills required to manage a busy ED are the same skills required to manage a company. For example, both require understanding colleagues' needs and effective communication. The ability to work with others and in teams is also essential. It is little wonder then that a significant number of EPs have been seeking post-doctoral graduate management training.

## OPTIONS AND OPPORTUNITIES

Many opportunities are available for EPs to learn about business management. In the past, many physicians learned on the job, but this option is becoming less feasible as business practices become more complex and competi-

tion increases for management positions. Many physicians interested in management are choosing formal training through universities or private professional societies as the most effective and efficient route to acquire basic business knowledge and skills.

#### Master in Business Administration (MBA)

The MBA degree provides physicians with a lifelong credential that certifies they have been professionally trained as managers. The traditional MBA curriculum, long admired and sought by students from around the world, typically covers the following core subjects: macro- and micro-economics, financial and managerial accounting, business statistics, organizational behavior, ethics and business law, operations management, information technology, marketing management, financial management, and strategic management. The two methodologies for teaching this curriculum are case-based (typified by Harvard University) and theoretical/research-based (typified by the University of Chicago). Both approaches directly embrace the need for acquiring substantive quantitative expertise.

Physicians who successfully earn the MBA degree are best positioned to compete with other MBA-credentialed administrators in the health care field. Much of the MBA degree is learning a new language and conceptual framework. Just as physicians are comfortable in the medical language and terminology, physicians who earn their MBA degree learn to speak about ROI (return on investment), capacity and utilization, team building, change management, innovation, process improvement, and competitive strategies. This knowledge base is becoming increasingly important in effectively managing health care organizations.

Networking is another fundamental aspect of joining an MBA program as a degree-seeking student. Attending an MBA program or an executive MBA program allows students to interact with the best and brightest future businesspeople. Making and nourishing these contacts is a priceless strategy for growth as a manager.

A recent study by Cejka & Co. reported 16% of 3000 surveyed physician executives had an MBA degree, representing a 23% rise since 1999 among this group.

#### Master in Management (MM or equivalent)

A popular alternative to the MBA degree is the Master of Management degree or its equivalent, such as the Master of Medical Management (MMM) or the Master of Health Administration (MHA). These degrees stress management skills over quantitative business administration skills. Physicians who earn this degree tend to enjoy thinking strategically, a critical skill in running today's health care organizations. Despite these attributes, unless physicians bolster

their MM curriculum with financial elective courses, some physicians who earn the MM degree or equivalent may feel less confident in their quantitative abilities to interact confidently with chief financial officers or controllers.

Another alternative to EPs wanting to "test the waters" before moving into a full-fledged master level degree program, is to join an executive management seminar. These seminars are everywhere nowadays, often providing sponsoring institutions with considerable profit margins. Certificate programs offer a good start to management training. EPs interested in the opportunity to explore their interest in management through a certificate management program are encouraged to become familiar with the American College of Physician Executives (ACPE; website [www.acpe.org](http://www.acpe.org)), an organization that has long dealt with the delicate task of persuading physicians that it is "okay" to move into management positions.

Pursuit of a post-doctorate master's degree can be both expensive and time-consuming. Most master level programs are two to four years in length although executive MBA programs, which are scheduled during evenings and weekends, tend to require less time to complete. Programs vary widely in price, often depending on the brand name attractiveness of a particular school. Many programs can cost more than \$30,000 per year, although savvy physician consumers will often find a more reasonably priced MBA program offered by an accredited institution of higher education located in their communities. Many MBA-credentialed people in the US have earned their MBA degree during evenings on a part-time basis while working full-time. Thus, physicians may find comfort in attending evening or weekend programs with countless other working individuals seeking the same rewards that come from further education.

#### Master of Public Health Degree (MPH)

Physicians, who enroll in an MPH program with the goal of moving from clinical medicine into management, should reconsider their choice of program. Competency in public health is entirely different from competency in running an organization well. The MPH curriculum should be reviewed carefully to assess the degree to which it addresses the training needs for physicians required to perform effectively in a demanding management position.

#### Combined MD/MBA Programs

Many medical schools and business schools offer combined MD/MBA programs. Within the last 5 years, AMA data reveals that the number of joint MD/MBA programs increased from 28 to 36 at US Medical Schools.<sup>2</sup> The scheduling of these two degrees varies greatly. For example, some programs offer a "discount" on tuition by compressing six years of graduate school into four or five and integrating MD and MBA curricula throughout the training period. Other programs require that students complete the two degrees sequentially

in six years and offer no discount. After graduation, students may choose to do a clinical residency or apprentice as an associate in a related health care field, such as health care finance or consulting.

There are pluses and minuses to completing the MBA during medical school. Some students find a challenge in the integration of business training with medical training, because of the radically different focuses of the curricula. Medical students who have moved from undergraduate studies directly into medical school without substantive work experience may feel challenged by MBA school colleagues who have sometimes an average of five years of post-college work experience. For example, the class of 2003 at top business school Dartmouth University School of Business (Tuck) had an average of 4.5 years of work experience prior to entering the 2-year MBA program.<sup>3</sup> MD/MBA students are typically not expected to have similar experiences because a large percentage of medical students start school early after college. MD/MBA students who decide not to pursue clinical medicine may move into health care management, finance, or consulting early in their careers. A growing number of pharmaceutical, consulting, medical supplies, biotechnology, managed care organizations, and insurance companies seek physicians who have the unbeatable combination of health care and management expertise.

## OPPORTUNITIES FOR EPS WITH FORMAL TRAINING IN MANAGEMENT

EM is a very flexible career, which allows pursuit of other interests, including attending management seminars or earning an MBA, MM, or MHA degree. EPs are uniquely qualified to understand hospital systems and move up the career ladder from ED director to vice-president for medical affairs (VPAA) to hospital chief executive officer to health system chief executive officer. Who is better qualified to meet the demands of such jobs than a physician with both clinical and business management expertise and experience?

Other options open to EPs with formal management training include working full-time or part-time with a consulting firm. In addition, formal management training can open up the opportunity for a total career change such as working as an analyst on Wall Street for healthcare equities or working as a health researcher evaluating the cost-effectiveness of interventions. There is a tremendous need for this type of analysis in EM. Finally, many EPs are well suited by temperament to become entrepreneurs. Starting a company can be the most rewarding and challenging experience of a lifetime.

## MANAGING A BUSY ED

Formal management training for the EP who wants to hone his/her skills in managing people can be very valuable. The art of managing a busy ED requires a combination of clinical acumen and personnel management. Many of the classes

offered give a formal management perspective on interpersonal relations and communication that are useful skills for the budding ED manager.

### CONCLUSION

The business side of medicine is constantly changing and becoming more complex. Formal management training is becoming a qualifier to work in this environment. EM offers a systems perspective and lifestyle flexibility that enables physicians to obtain further education and pursue a variety of career opportunities. There is tremendous demand for physicians with formal management training. It is clear that the career of the EP can evolve in many directions. This is one of our specialty's greatest strengths.

### References:

- 1) Feied CF. Emergency medicine can play a leadership role in enterprise-wide clinical information systems. *Ann Emerg Med*. 2000;35:162-7.
- 2) <http://www.ama-assn.org/>
- 3) <http://www.dartmouth.edu/tuck/about/ataglace/>





## 29

History and Current  
State of Emergency  
Medicine

FACULTY AUTHOR:

Robert McNamara, MD, FAAEM (Temple University, Philadelphia)

FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

## THE EARLY YEARS

The call for modern Emergency Medicine (EM), as we know it, was first initiated in the mid-1950s. One can look back earlier and uncover interesting historical tidbits such as hearses often doubled as ambulances in the early 20<sup>th</sup> century or the use of electric open cardiac defibrillation in the 19<sup>th</sup> century. However, the genesis of a comprehensive emergency department (ED) service with full-time emergency physicians (EPs) is a relatively recent event. Anyone familiar with the TV show "M\*A\*S\*H" should note that the concept of bringing acute care close to the battlefield was fully implemented in the Korean War. Those crack surgical teams returned to a less developed system in their US homeland, leading a noted surgeon, Robert Kennedy to comment that the weakest link in the chain of care of the injured patient was the ED phase.<sup>1</sup>

As the decade progressed there was further recognition of the "problem" in the ED. Several factors had caused a steady increase in ED visits in this time period and the haphazard staffing was called into question. In many places, the ED physician staff consisted solely of interns with no attending support. A 1958 survey by Shortliffe noted a 400% increase in ED patient volume in nine New England hospitals between 1940 and 1955.<sup>2</sup> Shortliffe commented that the current staffing patterns did not meet the increased demand and complexity of the cases. The NEJM editors agreed stating that an experienced physician is the "indispensable sine qua non" of quality emergency care.<sup>3</sup> This editorial was essentially a call for the creation of the specialty of EM.

EM historians generally point to 1961 and the "Alexandria (VA) Plan" as the start of the first full-time group of dedicated EPs under Dr. James Mills' leadership. That same year saw the creation of the "Pontiac Plan" in Michigan where 23 physicians agreed to dedicate part of their time as a group to the ED. In 1966, the AMA Department of Hospitals and Medical Facilities reviewed the "ED problem" once again, and noted the same issues as Shortliffe regarding physician staffing patterns.<sup>4</sup> On August 16, 1968, in Lansing (Michigan), eight

physicians founded the American College of Emergency Physicians (ACEP) under the Presidency of John G. Wiegenstein, MD. At a meeting of physicians interested in EM convened by Reinald Leidelmeyer later that year in Virginia, the ACEP representatives were able to convince the attendees to go with their structure and a true national specialty took off. ACEP became the first organized specialty organization in EM. Another important event in 1968 was a meeting of six surgeons who served as ED directors over lunch at the American College of Surgeons meeting in San Francisco. This event gave birth to the academic organization known as University Association for Emergency Medical Services UA/EMS (now known as SAEM, the Society for Academic Emergency Medicine).

Throughout the 1970s, ACEP and UA/EMS served as the nidus for the growth of the specialty. Several important events occurred in this same decade including the following:

- 1970 - Bruce Janiak becomes the first EM resident at the University of Cincinnati.
- 1971 - First academic departments of EM are established at the University of Southern California (USC) and then at Louisville, Kentucky.
- 1972 - JACEP (now Annals of EM) the first peer-reviewed EM journal is created.
- 1973 - The AMA recognizes EM with provisional section status.
- 1975 - A test committee starts work on a board exam.
- 1975 - STEM, the Society of Teachers of EM, is created.
- 1976 - ABEM, the American Board of EM, is incorporated.
- 1979 - The American Board of Medical Specialties (ABMS) approves ABEM as the 23<sup>rd</sup> official medical specialty receiving ABMS "modified conjoint" board status.

## DEVELOPMENT OF EM

The administration of the first ABEM examination in 1980 heralded a decade of rapid growth and development for EM. The offering of the first board exam culminated the efforts of those who answered the call of the 1950s and 1960s to create the specialty of EM. As many of the founders of EM had not been through an EM residency, the ABEM examination was open from 1980 to 1988 to those EPs who qualified under what was known as the "practice track". The qualifying criteria for this track included 5 years of full time EM practice with at least 5,000 clinical hours practicing EM. Such a track is known as a "grand-fathering" track and is typical of the pattern followed by all other medical and surgical specialties when they were first established. The current requirements for osteopathic board certification through AOBEM are similar. The AOBEM and ABEM practice track are no longer open. To become certified

by ABEM or AOBEM, a physician must now first complete an EM residency accredited respectively by the American Council for Graduate Medical Education (ACGME) or the American Osteopathic Association (AOA).

By 1981, there were 56 residencies in EM with more being added yearly. In 1983, the American Journal of Emergency Medicine (AJEM) was inaugurated with J. Douglas White as Editor-in-Chief. One year later, Peter Rosen did the same with the Journal of Emergency Medicine (JEM), which is now the official journal of the American Academy of Emergency Medicine (AAEM). As the decade drew to a close, the final step in full specialty status came in 1989 with ABEM receiving "primary" board status which placed it on equal footing with the other specialties. Primary board status also opened the door to subspecialty training in EM-related areas such as toxicology, sports medicine and pediatric EM.

In 1989, the Society of Teachers of Emergency Medicine (STEM) merged with the UA/EMS to form the Society for Academic Emergency Medicine (SAEM) consolidating teaching, research and other academic matters under one umbrella. Other academic related groups were created at this time, however, including the Council of EM Residency Directors (CORD) and the Association of Academic Chairs of EM (AACEM) to represent the special concerns of those smaller but very important groups.

By the end of 1989 there were 17 full academic departments of EM in the nation's medical schools. For those interested, a more comprehensive review of the history of academic EM may be found at the SAEM web site ([www.saem.org](http://www.saem.org)).

### MODERN TIMES: CONFLICT AND CONTROVERSY

Those interested in EM need to understand certain controversies that have arisen in recent years about the practice of this specialty. The key areas of discussion are the issue of EM board certification as a practice requirement and the corporate practice of EM. The 1990s are described as the *decade of controversy* but the seeds of these issues were planted throughout the previous years. These two issues are the core reasons that led to the establishment of the American Academy of Emergency Medicine (AAEM) as a new professional society in 1993. Today, AAEM remains an outspoken advocate on behalf of the practicing board-certified emergency physician.

#### The Board Certification Issue

As mentioned above, the practice track for becoming board-certified in EM was a time-limited option. As expected, those who were close to meeting the criteria of 5 years/5000 hours of practice at the time of closure in 1988 felt they were victims of poor timing and that the cut-off date was unfair and arbitrary. The ABEM stance, which can be reviewed in detail at [www.abem.org](http://www.abem.org),

was that in the interest of patient welfare and the specialty, the practice track must be closed at a finite point. The concept that you could spend your first several years of EM practice "learning as you go" in an *unsupervised way on live patients* was one that had to end for the public interest. The AAEM completely supports the notion that supervised training in a residency program is best for the patients and the future of the specialty. However, economics reared its ugly head and those who were shut out filed suit against ABEM on September 5, 1990 in the matter of Daniels v. ABEM. This suit, which continues today, basically states that ABEM in collusion with others closed the practice track for their own economic benefit. It seems a bit odd that this is the contention since ABEM effectively decreased its earning potential by limiting the number of physicians eligible to take its certification exam. The plaintiffs point to higher salaries of board-certified EPs as compared to non-certified ones.

After the filing of the lawsuit, many of the physicians affected by this matter formed AEP, the Association of Emergency Physicians, a group dedicated to getting "recognition" for non-certified EPs. They were originally called ADEP, the Association of Disenfranchised Emergency Physicians, a name that awkwardly reflected their core mission. This group has taken action that is detrimental to the concept that a specialist in EM is a physician who has achieved board certification through ABEM or AOBEM. For instance, AEP distributed a brochure to hospital administrators saying that before hiring board-certified EPs they should know two "facts": 1) board-certified EPs do not provide a higher quality of care and 2) such EPs cost more money.

There have been other assaults on legitimate EM board certification including the existence of an alternative board, BCEM (Board of Certification in Emergency Medicine), under the auspices of the American Association of Physician Specialists. Additionally, the American Academy of Family Practice (AAFP) issued a policy statement in March of 1996 stating that family practitioners are "qualified" to practice EM. Fellowships in EM have been offered in a few locations that try to teach in one year the material which ABEM and AOBEM require accredited EM residency programs to teach in 3-4 years of training. The corporate influence on EM in this area has been especially problematic as these groups clearly seek to hire EPs who are not board-certified. This is evidenced in their advertisements for jobs and even in their staffing manuals that AAEM has obtained. Obviously, the better bottom line from paying less for a non-certified physician needs to be considered as a factor behind this.

AAEM is the leader in resisting the de-valuation of board certification in EM. We remain the only professional society in EM that requires all of its

voting members to be certified by ABEM or AOBEM. We have countered the efforts of AEP by contacting those same hospital administrators and by creating a website, [www.911emergency.org](http://www.911emergency.org), that informs the public which ED in their area has 24 hours a day and seven days a week coverage by an EM board certified EP. Recently, this Website was featured in the "Ladies Home Journal" (July 2001) and the site received 65,000 hits in the subsequent week. The driving force for AAEM on this matter is the public interest. There is extensive literature support that EM board-certified and residency-trained EPs provide a higher quality of care. This literature can be reviewed at our Website, [www.aaem.org](http://www.aaem.org), under the "board certification" link. If you are a student pursuing an EM residency, your ultimate professional goal will be board certification and AAEM will be the organization defending your hard-earned status as a true specialist. With our voice and your support, the public is learning not to accept anything less than the best for the emergency care of their family.

#### The Corporate Practice of EM

It is never too early to consider the economic aspects of your chosen career. In fact, too many physicians are clueless in this area leading us down paths that can put us at risk for exploitation. The cold hard fact is that much of medicine is fueled by money and that every specialty has its seedy economic issues. EM fortunately does not deal as directly with the beast of managed care like those in office practice; however, we do have problems. It should be stated up front that EPs are a generally highly compensated group. We compare very favorably to everyone but the procedure oriented specialists. We deserve this reward as we work under difficult circumstances at all hours and deal with critical patient care issues. Despite this, there is a significant problem in certain areas of EM.

#### Digest These Comments.

The EP who cares for the patient, toiling at the bedside at all hours, using skills acquired through years of difficult training, making high risk decisions critical to the well being of that patient deserves to receive the physician professional fee that is paid on behalf of that patient. No other person or physician is entitled to a portion of that fee unless the EP has decided there is something of value provided that is worth paying for. The physician must have the freedom to speak out on issues affecting patient care. A physician who is performing the required professional duties in a competent and professional manner should have job security and not be subject to termination for business reasons.

Do you agree with the above? These statements are the essence of the profession of medicine. This or similar wording can be found in the ethical canons of all the major professional societies and the writings of the highest

ethical body in medicine, the AMA's Council on Ethical and Judicial Affairs. Now what do you think happens when you try to splice the above with the profit motive? Ethics suffer and physicians are exploited to the point where their job dissatisfaction is profound enough to cause them to leave the specialty of EM. This unfortunately has happened in the field of EM. Certain physicians, including many early (and not so early) leaders of EM, saw the opportunity to make large sums of money by taking a piece of the other physician's professional fee in return for allowing that doctor to see patients in the ED where they held a contract. The more contracts the better was the return. This resulted in the birth of the multi-hospital ED contract management group (CMG). With large profits, lay people took interest to the point where there are now such firms - CMGs - traded on the stock market. The owner physicians have the luxury of not seeing patients or only working the plum day shifts during the week leaving nights, weekends and holidays to the workers.

Good old-fashioned greed is the driving force behind this and EM is not the only specialty with such problems. You see the same exact thing in private group practice when the owners (or contract holders) deny partnership to younger physicians, keeping them in the employee or independent contractor status. What is different in EM is that the major professional society, ACEP, which was responsible for guarding the interest of the practicing physician, sat by and allowed the unchecked growth of corporate EM. Conflicts of interest were plenty as many of the Presidents, board members and leaders of this organization were corporate owners or senior officers profiting from these arrangements. For example, the 1981 President Leonard Riggs, MD made approximately \$38 million dollars when he sold EmCare, his ED contract company, to Laidlaw, Inc. in 1996. ACEP has made some recent positive changes due to pressure from AAEM on the issues, but unfortunately continues to have a conflict by taking large sums of money from the corporate groups, in the form of advertising dollars, contributions and fees for booths at meetings.

The AAEM has clearly cut a different path for EM with the simple concept that the best form of practice for the patient, physician and the specialty is one in which the working physicians are the owners in an equal predefined partnership. An excellent discussion of the need to strive for this was penned recently by Brent Fisher in his article published in the year 2000 by the *American Journal of Emergency Medicine*.<sup>5</sup> The title of this piece, "Future of the Emergency Physician: Subject or Citizen?" nicely encapsulates the issue. AAEM has had great success in moving EM to this preferred type of practice. In the summer of 2001, we helped achieve a major victory for all of EM by keeping one of the largest hospital systems in the country, Catholic Healthcare West, from getting into the corporate practice of EM, thereby protecting the future of



many West Coast EPs. AAEM is using the existing ethical standards and in place regulations that prevent corporations from employing physicians to help in this movement. Much more detail can be obtained under the corporate practice and fee-splitting links at our Website ([www.aaem.org](http://www.aaem.org)).

### THE FUTURE

As a medical student there are many demands on your time and it is not easy to get involved in efforts to secure your future professional welfare. At this stage the basic requirement should be to become informed on the issues and to support, through your membership, the organizations that are charged with looking out for your professional interest. This is where AAEM comes into the picture. Peruse the literature and the websites of all the EM organizations and you will only find one group, AAEM, which wants to put you, the future EP, in charge of your professional destiny. We do not take corporate support and speak out and take action against those who would relegate the physician to a second-class status. Your membership alone is greatly valued by us and helps promote the mission and vision of AAEM. In the future when you have time and are not buried in anatomy or a tough surgical rotation, you can look to step up your involvement. This is a great specialty for all the reasons that have attracted you to read a book like this in the first place. It is up to the professional organizations to look out for those practicing it.

There are alternatives to AAEM's vision that you should know about. ACEP policy states that they accept all forms of practice. This is a de facto endorsement of corporations running your professional lives and other physicians skirting ethical guidelines and profiting from your future labors. Unfortunately, there is a degree of apathy among some EPs that plays into this. These EPs are willing to place their fate in the hands of others in return for less of the hard work it takes to own and run one's practice. Such physicians take comfort in the relatively decent salary and the lack of responsibilities to the medical staff and hospital as the company takes care of this. This same lack of involvement creates a precarious professional status and may come to haunt them when the company decides to terminate the physician. As you well know, businesses routinely weed out older workers in order to save salary costs by replacing them with younger employees. We are already seeing this happen to middle aged EPs who do not own their practice.

Some EPs have actually recently chosen the union route as a means to solve their problems caused by lack of ownership. Given the issues, it is understandable as to why these physicians formed a union. AAEM would hope that, as it grows in influence, the better alternative of gaining practice control as an owner will supplant the need for accepting a life as an employee requiring protection from a union.

Welcome to EM. Remember the past to understand the issues and be aware of the present, as it will largely determine the future you will have in this field. Good luck.

#### References:

- 1) Kennedy RH. Our fashionable killer, the oration on trauma. *Bull Am Coll Surg.* 1955;40:73-82.
- 2) Shortliffe EC, Hamilton TS, Noroian EH. The emergency room and the changing pattern of medical care. *NEJM.* 1958;258:20-25.
- 3) Anonymous. Emergency-ward service (editorial). *NEJM.* 1958;258:47-48.
- 4) AMA Department of Hospitals and Medical Facilities. The emergency department problem: an overview. *JAMA.* 1966;198:146-149.
- 5) Fisher BA, Wittlake WA. Future of the Emergency Physician: Subject or citizen? *Am J Emerg Med.* 2000;18:102-107.



# 30 Emergency Medicine Workforce: Current Profile and Projections

## STUDENT AUTHOR:

Rakesh Marwah, BS, MS-III (University of California, Irvine)

## FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (AAEM Secretary-Treasurer / Chair, West Suburban Health Care, Illinois / Rush/Cook County Hospital, Chicago)

## INTRODUCTION

When dealing with the various forces that shape the Emergency Medicine (EM) practice and environment, health care policy makers and specialty leaders find the accurate profiling of the emergency physician (EP) workforce to be most important.

Accuracy and details of this profile impact the quality of the care provided by EPs, the well-being of patients, practitioners and their families, and the EPs' career satisfaction and longevity. Questions and concerns include the supply and demand of EPs and of EM residency training positions, the number, types and qualifications of EM providers, the definition of a full time position in EM (a.k.a. full-time equivalents or FTE), and the type and geographic location of the practice EM specialists choose or have available. Economic forces and regulatory bodies also have a direct impact on the EPs' compensation, their task-load per hour of practice, their job security, and their well-being.

When profiling the EM workforce, the challenges are many. They include significant variability in the definition of what constitutes an ED and in the patterns and qualifications of the providers that are used to staff them. Significant variability persists between different EDs with regard to number and distribution of the hours of coverage, the qualifications of the onsite providers, and the available resources such as radiological and specialist back-up, nursing support, and the onsite availability of inpatient or critical care services. In addition, an undetermined number of the physicians who practice in EDs across the nation often work in more than one institution at any time, with an unknown number of them dedicating their time in a "locum tenens" or part-time pattern, changing jobs and locations quite frequently. This difficulty in profiling the EM workforce and practice is magnified by a

variable degree of non-compliance of hospitals and EP groups with attempts to survey or monitor their status and their available resources.

Another important challenge is encountered when trying to accurately assess the number of hours that are actually worked by EPs. Most calculations will tend to conservatively underestimate the total number of hours EPs dedicate to the maintenance of the EM safety net for our communities. This is mainly due to the difficulty and institutional variability in tracking clinical overtime, in estimating administrative time, or in accounting for the time required for training and continuing medical education. For example, reported hours may not include the hours when an EP continues to care for patients after the end of his or her shift, or when he or she are called in through a back-up system to cover unexpected surges in the number of patient visits. Administrative time is not included on the schedules; it is difficult to define and to accurately track. Published estimates do not account for the time spent in conferences and professional meetings, the service on hospital, regional, state or national organizations and committees, the required attendance at hospital and medical staff functions, or the time expended developing or reviewing publications, lectures, proposals and policies.

In general, payroll summaries and phone surveys are limited and have been notorious for grossly under- or over-reporting of patients and hours. Many rely on data available through membership lists (e.g. AMA, AOA, ACEP, AAEM, AHA, ABEM, AOBEM and State licensing boards) that are incomplete and do not reflect the degree of clinical or administrative employment. Last but not least, the healthcare environment is very dynamic and influenced by a wide variety of factors. Data is rapidly outdated. Published predictions and estimates are therefore limited.

That said, to-date, the most credible and comprehensive effort to profile the EM workforce in the USA remains the 1997 and 1999 studies by Moorhead et al., which were conducted by the American College of Emergency Physicians (ACEP).<sup>1, 2</sup>

## THE WORKFORCE PROFILE IN EM

### OVERVIEW

Moorhead's 1999 data provided strong evidence to the presence of nearly 5,100 EDs in the US where 31,800 physicians were practicing. His workgroup surveyed a carefully randomized sample of 40% of 5,329 hospitals in the nation that had reported to the American Hospital Association (AHA) having or potentially having an ED. They were able to secure a 44 % response rate. Moorhead used the "hospital definition" of what constitutes a full-time

clinical position (FTE). This number was reported by directors and estimated to be 40 hours per week of EM practice. Moorhead concluded that there were nearly 27,100 clinical FTEs available for EM practitioners in 1999 (5.35 FTEs/ED) and that the number had risen by 3 % over the 2-year span of his analysis. He also established that it took 3 physicians to fill every 2 full-time positions in EM (EP/FTE ratio of 1.48). This reflects how the majority of EPs work less than 40 hours per week and that responders possibly did not systematically account for administrative time in these two studies. In a separate study, Moorhead et al. also established EPs worked on average in 1.25 EDs, and then used this ratio in their national workforce study to estimate the total number of physicians practicing in the nation's EDs to be 31,797.

Moorhead also found that, in 1999, EDs contracted an average of 7.85 EPs per institution, with academic centers reporting the highest average (13.57 EP/ED) and rural EDs reporting the lowest (4.74).<sup>1</sup> The study also established that 87% of the nation's EDs had physician coverage 24 hours per day, with the remaining EDs found mainly in rural areas, relying on physician on-call coverage. On average, EDs cared for 23,900 patients per year and had a 17% admission rate, with a fifth of them going to critical care beds.

In EM, patterns of employment vary between independent contract status, hospital or corporate employees, and a variety of partnership arrangements. In 1999, Moorhead established 57% of EPs were considered to be employees - up from 50% in 1997, and a continuing decline in the number of those practicing as independent contractors.

Additional findings included a heavy and increasing reliance on physician assistants and nurse practitioners (32% of EDs) and an unscheduled clinical time average of 3.2 hour per week, which was highest in academic centers. EPs also reported an average weekly utilization of 6 hours due to on call backup systems and of 4.5 hours due to administration, research and teaching, a number that rose to 13.2 hours in academic centers.

In 1995, valuable data was derived from the AHA lists of hospitals by the Society for Academic Emergency Medicine (SAEM) Workforce taskforce indicating wide variability between states in the way ED care is delivered.<sup>3, 4</sup> Some states, particularly rural ones, have over 40 EDs per 1 million population (ND, SD, MT, WY). Only five States had less than 11 EDs per 1 million (CA, NY, NV, NJ, and CT).

#### PHYSICIAN WORKFORCE QUALIFICATIONS IN EM

Moorhead et al. and the ACEP workforce taskforce reported 62% of the 1999 EPs to be EM board certified. However, it is essential to note that

careful attention to this number reveals it included up to 4% who had certifications that are not recognized by ACEP, the American Academy of Emergency Medicine (AAEM), and the majority of state licensing and regulatory bodies. The study provides the breakdown, by type of certification as stated by the responders, establishing most valuable detail about the physician practitioners' profile with regard to this most sensitive issue in EM practice.

It establishes the 1999 percentage of legitimately EM-board certified EPs to be 53% in 1999. This refers to certification by the American Board of Emergency Medicine (ABEM) or the American Osteopathic Board of Emergency Medicine (AOBEM), respectively claimed by 50% and 3% of respondents. Another 4% were EM-residency trained, not board certified, which is likely due to the inclusion of residents from academic centers and graduates who were in transition awaiting the opportunity to pass the ABEM or AOBEM certification exam.

When compared with their 1997 data, the 1999 study revealed the national percentage of legitimately board certified EPs had been rising, up 3% in 2 years, with a slight decline in AOBEM-certified EP (down from 4% in 1997). Overall, the growth rate was slow and can be estimated to be at 1.5% per year, if the 1997-1999 period variables were to remain constant. Assuming all other variables that would impact EP supply and demand do not change, Moorhead's longitudinal data indicated the need to wait until the year 2030 before all EDs become staffed by ABEM- and AOBEM-certified EPs.

Of concern, Moorhead's study revealed a 1% increase in the percentage of ED practitioners with inadequately recognized certification, such as by the Board of Certification in Emergency Medicine (BCEM). This 33% relative growth rate over a 2-year period is to some extent alarming, considering that the numbers of legitimately board certified EPs (ABEM and AOBEM) had witnessed only a 6% relative increase during the same study period.

Other interesting 1999 findings revealed that 26% of ABEM- and AOBEM-certified EPs had additional non-EM training or certification (e.g., IM 11%, FM 8%, Pediatrics 3%).<sup>1</sup> Overall these numbers had decreased from 1997 when nearly a third of legitimately board certified EPs had such additional non-EM qualifications.<sup>2</sup> This probably reflected the aging and attrition of the workforce that had been board certified in the 1980's through the "grandfathering" clause for board certification in EM. Information regarding this clause can be found in chapter 47 of this book, describing the history and rationale that required a transitional period in the history of EM, when any physician who practiced full-time in EM for a minimum of 5 years was eligible to sit for the ABEM and AOBEM certification exam.

Who are the other physician practitioners in our workforce who were

reported to have no form of EM training or certification? Moorhead et al. revealed nearly 38% of our workforce belonged to that category. They are physicians who were recruited for a myriad of reasons to cover EDs where a shortage for qualified EPs persisted or where decision-makers wanted to avoid providing the more expensive cost of coverage by legitimately qualified physicians.<sup>5-10</sup> They include a very diverse profile of physicians, 84% of which claimed training or certification in another specialty (e.g., FM 37%, IM 30%, Pediatrics 8%).

One alarming portion of this data is how it reveals that, 33 years after establishing the first EM training program, roughly 4 out of every 10 EPs out there had no EM training and 1 out of every 15 had NO training or certification in ANY specialty at all. Moorhead's data is equally reassuring since it reveals that this least EM-prepared subgroup of physicians working in EDs is decreasing, down from representing 1 out of every 10 ED physicians out there. However, one must ask whether they are being replaced by EM trained physicians or by nurse practitioners and physician assistants. And if physician extender utilization is the actual answer, another question becomes pressing and most relevant, related to whether these extenders themselves are adequately trained in EM and supervised by qualified EPs. Chapter 47 addresses this issue in detail.

Moorhead also reported 42% of EDs in 1999 required some form of EM training credentials. Eleven per cent required ABEM or AOBEM board certification or eligibility through accredited EM residency training.

### DISTRIBUTION OF THE EM PHYSICIAN WORKFORCE

Moorhead also clearly established that, in 1999, the majority of EPs, who were ABEM- or AOBEM-certified, chose to practice in urban settings. Rural and suburban settings continued to suffer from a shortage for EM-qualified and legitimately board certified EPs, a distribution previously reported at the state level.<sup>11</sup> Moorhead et al. reported that only 24% of EPs in rural settings (32% in suburban) were ABEM- or AOBEM-certified in 1999.<sup>1</sup> This is in contrast with urban areas where the percentage was as high as 64%.

MDs and DOs respectively comprised 89% and 11% of the EPs in the workforce. Twelve percent of EPs were international medical school graduates (IMGs). Rural settings were more likely to recruit DOs when compared to academic medical centers. DOs represented 2% of the EPs in academic centers and 14% of the rural EP workforce. IMGs were most likely to be found in rural settings where they comprised 14% of the ED physician workforce.

## GENDER, AGE AND RACE PROFILES OF THE PHYSICIAN WORKFORCE

The 1999 data also revealed that 82% of EPs are white, 83% are male, and the average age is 42.6 years.<sup>1</sup> Interestingly, California 1996 data revealed female EPs worked on the average fewer hours than their male counterparts.<sup>12</sup> This California study also established that female EPs were disproportionately less likely to be found serving as the medical director for their ED.

## IS EM FACING A SHORTAGE OR A SURPLUS IN EPS?

If the 1997-1999 workforce variables were to remain constant, it is reasonable to conclude, based on Moorhead's studies, that the need for EM-residency trained and EM-board certified physicians persists across the nation and will continue for almost another 3 decades. However, the truth is not as simple as it seems.

In 2003, board certification (or eligibility) by ABEM or AOBEM meets the legal definition of 'standard of care' and is a public expectation. While EM professional organizations realize that this goal may be difficult to achieve in sparsely populated areas, there is agreement that it certainly should be strived for. Using the ABEM and AOBEM data, there are approximately 25,000 legitimately qualified or eligible EPs available in our 2003 workforce. This number includes ABEM- and AOBEM- eligible and certified EPs. With slightly over 1,400 EM residents graduating annually, we now have enough qualified EPs to staff every ED in the U.S. with at least one qualified EP 24/7 for the whole year. The additional staffing needs can be provided for by using alternative providers working mainly in minor care areas with appropriate real-time onsite supervision by qualified EP.<sup>11</sup> As a result, the days of unsupervised "on-the-job" EM training are finally over.

## KEY ISSUES IN WORKFORCE PROJECTIONS IN EM

Workforce issues in healthcare in general and EM in particular are actually dynamic and complex. To enable you as a reader to make your own assessment over the years to come requires us to describe what we consider as the most important variables playing a role in predicting whether a surplus or a shortage of EM-trained physicians will face EM in the future.

### 1) ED utilization by patients

This is the primary reason for the need for EDs and EPs. It is impacted by a number of important variables, such as:

- population growth and demographics;
- the availability of outpatient services;
- the prevalence of disease and the overall health of our communities;
- the aging of our population (older patients require more health services);



- the percentage of uninsured or under-insured patients in the US population;
- and, the degree of access this underprivileged segment of the population will have when dealing with emergent, urgent and non-urgent medical needs.

**2) EP workload per patient and the “right-sizing” of the EP workforce**

The higher the number of required clinical and administrative tasks per patient encounter, the higher the demand for EPs. Advancement in information technology can have a variable impact, in some cases facilitating patient flow and decreasing required EP time, and in others requiring additional attention. Likewise, advancements in available technological and clinical tools and interventions can have a variable impact. This includes for example the growing trend to rely on EPs to perform emergency ultrasonography on their patients. The question is not whether we can or should. It is whether EPs will be provided the needed additional time or compensation to support the adequate and safe addition of an other task.

Certainly, nursing shortages, and any decrease in the number of available support staff (e.g., clerical staff and EMTs) or in their scope of practice, demand more EP time and involvement, since less tasks can be delegated.

Other factors that directly impact workload and demand for EPs include: the higher acuity patients and ED overcrowding that are being reported across the nation; the use of observation units or protocols; institutional requirements to call or notify every private physician or medical group of the ED visit by one of their patients; the addition of prehospital, gate-keeping, hospitalist or inpatient support responsibilities; and the shifting of clerical, EMT and nursing duties to EPs (e.g., paging, splinting, computer order entries, admit orders, etc.) All of these possibilities increase the need for EP time and commitments. A myriad of efforts to deal with ED overcrowding are being proposed and applied across the nation's EDs with a yet-to-be established impact on demand for EP time, the availability of downtime, the quality of care and the well-being, career satisfaction and longevity of EPs. In Orange County, California, a five-year study (1995-2000) clearly established a 17% relative increase in the number of patients cared for per scheduled EP hour, a process we referred to as the “right-sizing of the EM workforce.”<sup>14</sup> Overall, this is a growing pattern in all industries and professions, including EM. Administrative tasks and overhead costs are increased or transferred to EPs. Down-time is reduced

between patient encounters, and stress level increased.

However, there is ultimately a limit on the number of tasks that can be squeezed into an hour or a shift. Initially, physicians will find themselves working harder and providing unscheduled clinical overtime.

Sooner or later, this care gets accounted for and additional demand for clinical ED coverage will appear. However, the question should be raised, whether the coverage is then provided by physicians or an alternative form of provider (chapter 47) and what impact this all will have on ED revenue and EP compensation.

### 3) The EM practice standards

The specific standards defining what is expected of EPs and of their EDs and the hospitals where they practice have a significant impact on EP supply and demand. Such standards are defined by regulatory and legislative bodies. They include for example federal or statewide legislation such as:

- The Emergency Medical Treatment and Active Labor Act (EMTALA), which requires that all patients who present to EDs should receive mandatory medical screening and stabilization.
- The Knox-Keene Act and the advent of managed care, which has resulted in a myriad of regional and institutional strategies that impact the time-required per patient and increase the administrative burden per encounter. Pre-authorization and post-stabilization calls to managed care entities, gate-keeping strategies, and ED- or hospital-based case management by administrators, all have an impact on EP demand, workload and compensation, and on the number of patients who present to our EDs.
- The standards used to define EPs' qualifications and responsibilities, on-call specialist availability and compensation, the scope of practice of ED support staff, or to categorize the capacity and role of an ED: these definitions are made by regulatory and legislative bodies such as the state health agencies, the state or federal government, the institution's medical staff, the local EMS agencies, and the state medical board. These standards impact the EP workload and demand. For example, they define who is qualified to care for emergency patients and to get compensation for this care, and who is recruited to staff an ED. For example, there are a very small number of states who accept other board certification than ABEM and AOBEM as an adequate qualification for directing Emergency Medical Services (EMS) agencies and staffing EDs and trauma centers. Such a trend can have a direct impact on the workforce and on the need for ABEM- or AOBEM-certified EPs.



- Changes in the qualifications used by certifying bodies and professional organizations also impact supply and demand. For example, since the year 2000, BCEM began requiring applicants to have completed a residency in a program that they recognize as adequate for EM practice. In the last decade, Family Medicine adopted position statements claiming their training programs provided adequate training for their graduates who choose to practice EM.<sup>15, 16</sup> Obviously, such dynamics also have an impact on the supply and demand in EM, making EM vulnerable to workforce issues and trends in other specialties. However, the same rationale exists in EM, with leadership calls and taskforces working to expand the EM curriculum to provide specific rural practice training to EM residents and strategies to promote the presence of EPs in such settings.
- Malpractice and liability issues, which certainly impact EM and the demand for our services. Non-EPs lack the experience needed to properly transfer or stabilize emergency patients. Sooner or later this creates considerable problems for institutions and networks that do not rely on properly trained and certified EPs. Recently, for example, one of the largest managed care organizations in the nation, facing a multi-million penalty for a case that resulted from an EMTALA violation, began systematically replacing all its non-EM boarded EPs with ABEM- or AOBEM-certified EPs.

**4) Shifts of patients out of the ED to lower acuity settings or to other providers.**

This perhaps can be the most significant source of reduction in the demand for properly trained EPs. Managed care, institutions, and ED staffing groups have begun triaging patients into on-site lower acuity tracks, where the care is provided by physician extenders or by less costly primary care physicians. We consider this growing trend to be perhaps the most important to watch over the next decade, since it circumvents many liability issues, by providing care to patients in a setting where EPs are also present to promptly assist and complement the clinical needs that may arise while caring for a mis-triaged patient. This care is typically provided during convenient hours to patients who used to be cared for by EPs.

The increased reliance on lower acuity tracks within the ED and on alternative EM providers such as physician extenders has been documented in a number of studies. In California, a CAL/ACEP sponsored 5-year longitudinal study (with a 79-94% response rate) demonstrated that 47% of California EDs reported in 2000 the existence

of a lower acuity track within their own ED, representing an 8% increase since 1995. It also found a net 9% increase in ED reliance on Physician Assistants and Nurse Practitioners, with 40% of California EDs using these types of non-physician providers to care for their ED patients in the year 2000.<sup>17</sup>

**5) The number of EM-residency trained physicians graduating from EM programs**

This of course is currently the only recognized source for the qualified and credentialed supply. It is related to the number of EM allopathic and osteopathic EM programs and to the number of positions they are individually accredited to train and able to financially support.

### SO, IS THERE A SHORTAGE OR A SURPLUS?

The need for EM residency trained physician continues. Seven years ago, studies by Miller et al. provided additional evidence that EM is a manpower shortage area.<sup>18, 19</sup> In particular, the specialty compared very favorably with the "core specialties" with only 5.4% reporting that they received only 1 job offer. As a matter of fact, nearly 90% said their position was their first choice, 75% reported finding a job in the geographical area which was their first preferred choice. Only 20.0% reported a salary lower than expected. These figures were nearly all lower than other hospital-based specialties, surgical subspecialties (other than orthopedics) and IM subspecialties.<sup>18</sup> Likewise, a 1998 study in JAMA reported a higher vacancy rate in EM academic positions when compared to other specialties, suggesting a manpower need in academic EM as well.<sup>20</sup>

Miller also surveyed residency directors across all specialties. EM residency directors were least likely to believe that their graduates have "significant difficulty" finding a job (0.6 % which is the 2nd lowest specialty), that their graduates will have difficulty within 3 years, or to consider reducing the size of their residency class.<sup>19</sup>

Other relevant findings by Miller et al. indicated 25% of EM residency graduates went into academics. They were among the lowest (<15%) to seek a practice in small towns with a population less than 50,000 or to join a closed panel HMO (2.9%). EM had the highest percentage of graduates going into group practice (80%).

In 1995, Holliman et al. used the number of job advertisements in the primary EM medical journal to evaluate the need for EPs and found a need for 1,348 open Full-time and 28 part-time positions.<sup>3</sup> Their methodology underestimates actual openings and shortage. At that time, they concluded the search for qualified EPs would continue for a number of decades. This

need remains readily evident in any of the journals and newsletters of the specialty, many of which feature several pages of open positions to be available all over the nation. Many ED groups continue to use recruiters and to dedicate significant resources to find clinicians to fill the need they have for qualified EPs.<sup>3, 4</sup>

## ED PATIENT VISITS

### **Predictions and Miscalculations -Do they ever get it right?**

In 1981, the Council of Graduate Medical Education (COGME) predicted that the year 1990 would witness 68.3 million ED visits and a need for 14,686 EPs, based on an assumption that 2.14 FTEs were needed per 10,000 visits (roughly 2.6 patients per hour of EP coverage).<sup>21</sup>

National recommendations and policies were drafted based on those calculations. However, these predictions fell grossly short of the reality drawn by the rapid changes in our society and health care systems. Actual data revealed that there were 92.1 million ED visits in 1990. EM workforce needs were underestimated. The gross miscalculation left the EM workforce in a continuing shortage of qualified EPs.

In addition, under the widely held premise that half the ED patients did not belong there, the federal government and organized medicine made a very strong effort in the 1990's to shift the patients out of the EDs into the offices of primary care physicians. The driving force was managed care replacing the fee-for-service model across the nation. The tools used included the use of ED gatekeepers, patient education, financial disincentives and increasing patients' clinic access. The number of ED visits actually took a pause for a couple years in the mid-1990s.

By the end of the millennium, this trend reverted back to its original direction and pattern. ED visits began rising at the state, regional and national levels. An aging population, a persistent large number of patients without insurance, and a process of "reverse selection" (of patients to the ED after being seen in the clinic) were among the reasons to which the failure of the effort to decrease demand for ED utilization was attributed. In 2002, the Centers for Disease Control and Prevention (CDC) was reporting that the nation's EDs had a total 2001 annual census of 108 million visits, compared with 95 million in 1995.<sup>22</sup> Projections of EP needs should, therefore, always closely match the trends of ED utilization.

## NUMBER OF EDS

The Studies by Moorhead's and the CDC confirmed that ED closures were a national problem, not only a regional one that was reported in a number of states.<sup>1, 13, 21-23</sup> Overall, and for at least one decade, reports have been indicating ED closures at an annual rate of 1-2%, typically occurring in hospitals and EDs that were small in size or had low occupancy rates. They included facilities in both rural and urban settings. However, EM reports, including Moorhead's national study, indicate that overall a rise in the number of FTEs was needed to staff the remaining EDs.<sup>1, 14, 23</sup> More recently, the CDC reported the results of a national study showing ED visits in 2001 had increased by 14% since 1997.<sup>22</sup> The CDC reported 108 million visitors to EDs, compared with 95 million in 1997. The report also highlighted the national ED overcrowding problem: for example, waiting time for non-urgent visits had increased 33%, from 51 minutes in 1997 to 68 minutes in 2000. The report points out that because the number of hospitals providing emergency care decreased from 4,005 to 3,934 between 1997 and 2000, the number of annual visits per ED had increased by 16% since 1997, from 24,000 to 27,000. Across the nation, a larger number of physicians are now caring for a higher number of ED patient visits to the EDs which had remained open.

## EP SUPPLY

In 1993, COGME predicted an oversupply of physicians and nurses. Federal authorities and academic institutions placed caps on the total number of residency spots and implemented various plans and incentives that aimed at encouraging medical students to go into primary care specialties.<sup>25</sup> EM was classified as a non-primary care specialty. Its graduates and practitioners were considered specialists. One would have expected this to slow down the growth in numbers of residency programs and available annual positions in EM. Concerns were stated that forced reductions would occur.<sup>26</sup>

Well, this did not occur. EM witnessed a slowdown of its initially very rapid rise. However, the number of programs and available positions where EM applicants could train in EM continued to grow, even more rapidly than all primary care specialties. As of 2002, 5.3% of the applicants in the Match were seeking EM positions. Having one of the lowest two percentages of unfilled spots in the Match year after year, EM remains one of the most competitive two specialties. This is also demonstrated when one notes that EM continues to "match" one of the lowest numbers of international medical graduates (1-2%). Nearly 10% of EM programs are requesting an increase in their total number of residency spots and EM leaders have identified at least 20 US cities that could support a new EM residency program.<sup>27</sup>

### 1. Residency positions

In 2002, EM had nearly 145 allopathic and osteopathic EM residency training programs that were graduating over 1,400 residents per year. Is this too much or too little? This remains a most difficult question to answer. Should EM produce a higher or smaller number of yearly graduates to meet the needs of all the EDs across the nation?

In 1992, the *COGME* published a report predicting an oversupply of physicians and recommended capping postgraduate positions to 110% of the number of US medical school graduates.<sup>25</sup> Such oversupply and a predominant production of specialists who were paid considerably more than primary care physicians was believed to be a primary force causing the rapid national rise in health care costs.<sup>28</sup> Facing a continuous rise in medical expenditures, legislative and other national efforts were made in the 1990's to cap the production of specialists and to increase the percentage of primary care physicians in the USA.<sup>28</sup> State-based voluntary incentive programs, a cap of total residency slots at 1996 levels, a significant reduction of "Indirect Medical Education" Medicare payments, and other measures were put in place to curtail the growth of output of physicians, particularly specialists, including those going into the specialty of EM. In order to establish a new EM program, residency positions had to be taken away from another residency program in a non-EM specialty at the same institution, if federal funding was to be secured to pay the new EM resident salaries.

Despite this significant obstacle for the development of new EM programs, the last 6 years demonstrated a continued (but slowed) growth in EM residencies and in the output of EM graduates. As a matter of fact, despite intentional federal and institutional efforts to favor the production of family physicians and internists, EM allopathic residency programs increased by nearly 32% between 1992 (96) and 2002 (127), having also doubled in the previous decade (1982-1992). Between 1992 and 1998, EM PGY-1 spots went from 2.8 % to 4.6 % (a 64 % increase) of the total available positions in the National Residency Matching Program (NRMP) while FM went from 12.2 % to 18.2 % (a 49 % increase) and IM stayed at 23 %. Transitional, surgery, psychiatry programs and others saw a reduction in total positions. More recently, the comparison of 1997 and 1999 workforce data published by the ACEP resulted in renewed calls to establish programs in up to 20 cities that were considered candidates for new EM programs.<sup>27</sup>

## COMPENSATION ISSUES: AN OVERVIEW

### TYPES AND PATTERNS OF PRACTICE IN EM:

Simply stated, EPs typically work for a group that has secured an exclusive contract to provide all the physician staffing needs of a hospital ED. The group can be owned by any number of the EPs working at that institution, or by local, regional or national contract medical groups (known as CMGs). The CMGs may be owned by a number of senior physicians, a partnership with a diverse profile of share distribution profiles, or by lay entities such as publicly-held companies. In a number of EDs, the senior partner(s) or contract holder(s) have control over the management fees and the distribution of the net revenue generated by clinical care that is provided collectively by all EPs practicing in an ED. A significant number of groups (23-40%) do not disclose to their practicing EPs the total collected by individuals or by the group or provide a detailed breakdown of operational expenses. They pay their rank and file physicians a pre-set hourly salary. They directly collect all professional fees billed in the name of all the physicians they schedule in the ED that they are contracted to staff. A single physician, a number of senior partners, or a corporate entity own these "Physician Practice Management" firms (PPMs). The PPMs control extends over anywhere between one up to hundreds of EDs. Variations exist in the degree of profit sharing with employees or partners - if allowed. A recent AAEM report indicates at least 60% of EPs practiced in a setting where the "books were open."<sup>29</sup> Roughly, 83% of responders felt satisfied with their group and 80% believed they were fairly compensated.

Overall, EPs may spend 3.6 hours per week on non-scheduled clinical duties, 13.9 hours per week providing on call backup to the ED, and 6.1 hours per week on administration.<sup>1</sup> EPs were relatively paid higher than the graduates of primary care disciplines and relatively within a wide range depending on geographical location, acuity, patient population, number of patients seen per hour, and the type of relationship they had with their employer. Nearly a fourth (22%) of ED directors in 1999 reported paying a differential for ABEM or AOBEM certification, averaged at 8.6%, with a high of 10.4%.<sup>1</sup> Only 2% of responding institutions reported paying a differential (8.4% average) to EPs with an EM subspecialty certification.<sup>1</sup>

### JOB SECURITY:

Job security for EPs is defined or impacted by a number of internal and external issues. Internal issues include critical topics such as due process, restrictive covenants, non-interference clauses, fairness, fee-splitting, partnership tracks, group governance, and entry or exit strategies.<sup>30</sup> These



are largely discussed in chapter 48, which we urge you to read very attentively.

External threats include all factors that impact health care in general, such as the malpractice crisis, changes in third party payer reimbursement rates or in the qualifications required to practice EM, and factors such as ED closures, overcrowding, and nursing shortages.

One important threat that is both internal and external to the specialty is the corporate practice of medicine by lay entities. This matter is not unique to EM. For many decades, this has been identified by the house of medicine, consumers, medical boards, and legislators as detrimental to patient care. Many states have developed specific laws to restrict or prohibit the corporate practice of medicine by lay entities. This threat is manifested in EM when the EP group or hospital corporation is owned or purchased by a lay entity or by physician executives who no longer practice clinical medicine. The damage is most evident when health care systems, hospitals and physician or EP groups declare bankruptcy or when they dictate practice conditions that are not best for the well-being of patients or EPs due to one bottom-line: cost-reduction and the maximization of the net profit of their owners and shareholders. The American Academy of EM is particularly opposed to these corporate schemes and has been poised and active in legally and professionally confronting them. Additional information regarding this matter is available in chapter 48.

### BURN-OUT AND ATTRITION IN EM

Whether EPs are more likely to burn out than their colleagues in other specialties has been a matter of heated debate. In 1992, the ACEP 1992 Manpower Taskforce reported that 93% of the practitioners who were not eligible to achieve EM board certification would stop practicing EM after a maximum of 5 years.<sup>31</sup> The taskforce claimed at that time that EP attrition is "in the teens" among EM residency graduates. A study by Dr. L. Binder questioned the accuracy of the ACEP taskforce report. It established the annual attrition rate at 4 % or less.<sup>32</sup> Based on the numbers of ABEM recertification application, it was established that the annual attrition rate for board certified and residency trained EPs was at 3 %. The low attrition among EM residency graduates has been confirmed and continues to be studied through the work of the ABEM longitudinal survey which is administered every 5 years.<sup>33</sup>

Hall and Wakeman found that physicians who were paid more and were EM board certified were more likely to stay in EM.<sup>34</sup> They also found a decrease in the number of hours EPs spend doing clinical work and an increase in the number of hours doing administrative work.

However, it is important to note that there have been a handful of EM studies that document significant workforce concerns with regard to a number of EPs feeling financially exploited, to termination without due process, and to job security.<sup>29, 30, 33</sup> In one study of ABEM certified EPs, 25% felt burn-out and 23% stated they were planning to leave the specialty within 5 years. Minor differences existed based on EM training or practice track certification.<sup>35</sup>

## CONCLUSION

As early as in 1961, physicians began staffing the hospital area traditionally referred to as "emergency room" (ER) on a full-time or part-time basis. Confronted by public demand for quality and a mounting pressure to provide "adequate training," the founding mothers and fathers of the specialty established training and certification processes to demonstrate objectively the qualification of emergency practitioners in the field of EM. In other words, demand for EM has been and continues since the embryonic years of the specialty to be driven by a quest for qualified practitioners who are committed to and experienced in the delivery of a cost-conscious standard of care to ED patients. Demand for EPs is therefore impacted by the total number of patient visits to the ED, the workload they require, the standards defined by legislative and regulatory bodies, and by the number of EDs where EPs were needed to provide 24 hours of scheduled daily coverage.

Of course, organized EM will likely continue to debate whether we need to increase the number of EM residency graduates and training programs. Confronting a rapid and significant ED trend to utilize alternative providers, calls will continue to increase these numbers. The proliferation of Fast tracks, Urgent Care and lower acuity tracks, the continuing family medicine claim of EM qualification for their graduates, and the hybridization of staffing with alternative practitioners (Ch 47) shifts the patient load away from EPs and EM graduates to non-EP providers. The issue therefore is NOT "are there enough EPs?" as someone is working every shift. The issue is to what extent should the public in the future be served within our EDs by non-EM residency graduates?

Then again, the aging population, the continuing rise in the national number of ED visits, a renewed reliance by gatekeepers on the ED as a point of care, a rising acuity across the nation's EDs, and an increased task load served by EPs are all likely to require a continuing rise in demand for trained board certified EPs. For over 4 decades beginning with the day when the first physician assumed a full-time position caring for emergency patients, workforce issues in EM have remained vibrant and dynamic. The public demand for quality and service continues to increase, demanding user-



friendly, error-free, standardized patient care in our EDs. EP services and interventions have grown more complex. The public and judiciary expectation continues to rise for standardized processes for providing adequate specialized training and the demonstration of proficiency and experience when medical care is provided. EPs continue to deal with the most variable and unpredictable level of acuity and the most diverse patient pathology, under strenuous conditions and at odd hours. The need for EPs will continue to be mainly in evening, night and weekend hours, resulting in a lifestyle that is far from traditional, and one that requires commitment that can be provided long-term by those who feel qualified and relatively protected from the scrutiny of the medico-legal system, the medical staff and their peers in the medical community.

The demanding practice conditions in EM command adequate training and an exceptional flexibility that can only be provided long-term by qualified committed practitioners. To deliver the most optimal care and to sustain their commitment to the field, EPs need to have chosen the lifestyle and challenges that few other providers are willing or prepared to confront for a lifetime.

The workload per patient and the scope of interventions available in EM continues to grow more complex and demanding. Regulatory bodies continue to define specific provider qualifications and professional standards. The establishment of a rigorous process for EM board certification and the increasing recognition of the added value provided by EM residency training, the relentless public demand for quality without any errors or perception of suboptimal care, and the growing aging US population will no doubt continue to define a need for the specialty of EM. Our willingness to adapt, to participate in shaping our future at the institutional, state and national levels, and to be flexible and proactive is evident in the diversity and unpredictability of our practice. The vigilance and commitment of our national and state professional organizations, as demonstrated by the landmark Moorhead studies, and our willingness to invest human talent and time and financial resources into organized EM are our best guarantee that the specialty will continue to flourish, to promote the best care for patients and to protect the well being and longevity of our physicians. Our patients deserve nothing less.

## References:

- 1) Moorhead JC, Gallery ME, Hirshkorn C, et al.: A Study of the Workforce in Emergency Medicine: 1999. *Ann Emerg Med* 2002;40:3-15.
- 2) Moorhead JC; Gallery ME; Mannle T; Chaney WC; Conrad LC; Dalsey WC; Herman S; Hockberger RS; McDonald SC; Packard DC; et al. A study of the workforce in emergency medicine [see comments]. *Annals of Emergency Medicine*, 1998 May, 31(5):595-607.
- 3) Holliman CJ, Wuerz RC, Chapman DM, et al. Workforce projections for emergency medicine: how many emergency physicians does the United States need? *Academic Emergency Medicine*. 1997;4:725-730.
- 4) Holliman CJ, Wuerz RC, Hirshberg AJ. For the SAEM workforce taskforce. Analysis of factors affecting US emergency physicians workforce projections. *Academic Emergency Medicine*. 1997;4:731-735.
- 5) Katz B. The emergency medicine marketplace for 2001/2. *Emergency Physicians Monthly*. September 2001.
- 6) Katz B. The emergency medicine marketplace for 2002/3. *Emergency Physicians Monthly*. September 2002.
- 7) Katz B. Job searching on the web & the emergency medicine market for 2001/2. *EMRA Life after Residency*. American College of Emergency Physicians Scientific Assembly 2001; ACEP Program Syllabus, page 15.
- 8) Katz B. Personal communication. The Midwest Salary. Compiled for Premier Healthcare Services of Ohio by the Cambridge Group, Ltd., March/April, 2001. The Katz Company, Inc. Tampa, FL; katzco@tampabay.rr.com.
- 9) Katz B. Personal communication. Virginia Salary Survey. Compiled for the Lewis Gale Clinic, Salem, VA, by the Cambridge Group, Ltd. March/April 1999. The Katz Company, Inc. Tampa, FL; katzco@tampabay.rr.com.
- 10) Katz B. Personal communication. Emergency Medicine Salary Survey 2001-2 (for physicians who are not ABEM or AOBEM boarded in EM). The Katz Company, Inc. Tampa, FL; katzco@tampabay.rr.com.
- 11) Haase CE, Lewis LM, Kao B. "Do estimates of Emergency Medicine workforce underestimate current needs?" *Annals of Emergency Medicine*. 1996;28:666-670.
- 12) Kazzi A, Langdorf M, Tabar P. Gender profile of emergency physician practice in California. *Ann Emerg Med*. 2000;36:5-9.
- 13) Scaletta, T: What Is a Reasonable Clinical Workload? *AAEM, Common Sense*, Sep/Oct 1999.
- 14) Kazzi A, Peng A, Langdorf M. Orange County California Report on Five-Year Trends in the ED Safety Net." *Academic Emergency Medicine* 2001, 8:5:570.
- 15) American Academy of Family Practice. March 1996, Policy statement ("Family physicians are qualified to do EM") and Medical Tribune Lead article (May 2, 1996)
- 16) Kahn NB. Specialty Practice of Family Practice Residency Graduates, 1969 through 1993. *JAMA* 1996;275:713.
- 17) Kazzi A, Phelps M, Gee B, Kim B, Langdorf M. 1995-2000 Trends in Emergency Department Utilization of Physician Extenders and Lower Acuity Tracks- A 5-year Longitudinal Report. Presented at the Fifth SAEM Western Regional Research Conference, San Diego, April 2002 and at the CAL/ACEP Scientific Assembly, Long Beach, California, June 2002. Manuscript in preparation.
- 18) Miller RS, Dunn MR, Richter TH, et al. Employment-seeking experiences of resident physicians completing training during 1996. *JAMA* 1998;280:777-783.
- 19) Miller RS, Jonas SH, Whitcomb ME. The initial employment status of physicians completing training in 1994. *JAMA* 1996;275:708-712.
- 20) Barzansky, Jonas, Etzel. Educational programs in US medical schools, 1997-1998, *JAMA* 1998; 280:803-808.

- 21) CDC: ER visits, waiting time up in 2000. The Centers for Disease Control and Prevention. Graduate Medical Education National Advisory Committee: Summary Report to the Secretary, Department of Health and Human Services, Publication HRA 81-651. Washington, DC: US Department of Health and Human Services, Public Health Service, Health Resources Administration, September 30, 1980.
- 22) <http://www.cdc.gov/od/oc/media/archives.htm>
- 23) Kazzi AA, Blasko B, Langdorf MI, Young G. The CAL/ACEP workforce taskforce initial report: a longitudinal 1-year California registry. *Academic Emergency Medicine*. 1998;5:460.
- 24) <http://www.hhs.gov/oig/oei/whatsnew.html>. Department of Human and Health Services - Office of the Inspector General, March 200. Hospital Closure: 1999; OEI-04-01-0002
- 25) Council on Graduate Medical Education: "Improving Access to health care through physician workforce reform: directions for the 21st century". Third report, Rockville MD, US Public Health Service, 1992.
- 26) Kozak R, Kazzi A, Langdorf M, et al. The Threat of Funding Cuts for Graduate Medical Education: Survey of Decision-Makers. *Academic Emergency Medicine*, July 1996, volume 4 / number 7, pp. 736 -741.
- 27) Binder L. Presentation to the Council of Emergency Medicine Residency Directors. Seattle. October 2002.
- 28) Cooper RA. Perspectives on the physician workforce to the year 2020. *JAMA* 1995;274:1534.
- 29) Huang D, McNamara R. The AAEM Emergency Medicine Group Survey Results. *Common Sense* (Resident Section Newsletter), May-June 2003, volume 10, issue 3.
- 30) Plantz SH, Kreplik LW, Panacek EA, et al. A national survey of board-certified emergency physicians: quality of care and practice structure issues. *American Journal of Emergency Medicine* 1998;16:1-4.
- 31) Franaszek J. Activities of the manpower task force of the American College of Emergency Physicians. *Annals of Emergency Medicine* 1992;364-365.
- 32) Binder LS. *AEM* 1994;1:90
- 33) Rund DA, Munger BS, Reinhart MA. Longitudinal study of Emergency Physicians by the American Board of Emergency Medicine: 1995 interim survey results. *Annals of Emergency Medicine* 1997;5:617-620.
- 34) Hall KN, Wakeman MA: Residency-trained emergency physicians: their demographics, practice evolution, and attrition from emergency medicine. *J Emerg Med* 1999 Jan-Feb;17(1):7-15.
- 35) Doan-Wiggins L, Zun L, Cooper MA, Meyers DL, Chen EH. Practice Satisfaction, occupational stress, and attrition of emergency physicians. *Wellness Task Force. Academic Emergency Medicine* 1995;2:556-563.

## 31

Shift Work in  
Emergency Medicine

## RESIDENT AUTHOR:

Julie Hopkins Hamilton, MD (Stanford University)

## FACULTY AUTHOR:

Rebecca Smith-Coggins, MD, FAAEM, FACEP (Stanford University)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (West Suburban Health Care, Illinois/ Rush/ Cook County Hospital, Chicago)

## INTRODUCTION

Emergency Medicine (EM) is a specialty that requires physicians to cope with rotating schedules between day, evening, and overnight shifts. This rotation disrupts circadian rhythms and causes emotional and physical stress. Shift work has been associated with a myriad of social, psychological, and medical problems. For example, it has been blamed for causing clinical depression in vulnerable individuals and attributed to a cardiovascular risk comparable to the one produced by smoking one pack of cigarettes per day.<sup>1</sup>

Rotating shifts requiring nocturnal work continue to be cited as the single most stressful aspect of EM. In 1995, the American College of Emergency Physicians (ACEP) issued a policy statement regarding shift work that stated, "Well-being is adversely affected by constantly rotating shifts. The effects of rotating shifts are cumulative, and represent the most important reason physicians leave the specialty."<sup>2</sup> Studies of shift workers show dropout rates of 20% at 1 year and 33% at 2 years. Reasons given for leaving shift work include the impact on family life, social contacts, lifestyle, and health.<sup>3</sup>

This chapter discusses circadian rhythms and the implications of disrupting those rhythms by working rotating shifts. Specifically, we will address the effects of this type of scheduling on the health, lifestyle, and productivity of emergency physicians (EPs). Finally, some adaptive and coping strategies are suggested. It is important to understand circadian theory and the consequences of shift work before you choose a lifetime career in EM.

## CIRCADIAN RHYTHMS

The existence of a biological clock in humans has been repeatedly demonstrated in temporal isolation studies, in which subjects are separated from all environmental and social time cues.<sup>4</sup> In isolation, the human sleep-wake rhythm inherently cycles every 25 hours. The suprachiasmatic nucleus of the hypothalamus is known to regulate the endogenous component of our internal clock. There is also an exogenous component consisting of external cues, the most

powerful of which is the light/dark cycle, but which also includes social factors, time clocks, temperature changes, and behavioral patterns such as eating schedules and sleep-wake schedules. Studies that deprived subjects of these external cues and disturbed their internal clocks led to desynchronization. Signs and symptoms included sleep disruption, short-term fatigue, irritability, loss of appetite, and altered judgment.<sup>5</sup>

For EPs, the problem of disordered sleep is compounded by circadian dysrhythmia. Activity at night will be out of phase with the circadian body temperature and other coupled rhythms. Each time the work schedule changes, the circadian system is in a desynchronized state for a period of time after the time shift. For shift workers to resynchronize their internal clocks takes time.<sup>2</sup> It takes our bodies two weeks of night shifts to advance our circadian rhythms 12 hours. Furthermore, the circadian clock impedes quality sleep during the day. The effects of mild sleep deprivation are cumulative. One night (or day) of reduced sleep may not lead to a great impairment in alertness, but the level of fatigue increases each night.

### HEALTH EFFECTS OF SHIFT WORK

Shift work is associated with both immediate and long-term risks to worker health and well-being. Circadian dysrhythmia may give rise to medical, psychological, and social problems, exacerbate pre-existing conditions, and negatively impact safety. Many EPs leave the field because of the negative impact on their health. Although the percentage is not as high for EM, between 20-30% of people leave shift work within the first 2 to 3 years because of ill health.<sup>3</sup> Such negative effects include:

- 1) Reduction in quality and quantity of sleep: EPs on rapidly rotating shifts have been found to have very poor sleeping patterns. Daytime sleep after night shifts tends to be lighter, more fragmented and less restful than nighttime sleep, since it is often interrupted by street noise, family activity, telephone calls, and other activities of daytime living. Even in a quiet environment, circadian effects hamper sleep. Daytime sleep is typically 2 hours shorter than nocturnal sleep, and both REM and 'stage 2 sleep' are shortened. The effects of chronic sleep deprivation include irritability and generalized fatigue, which can have significant negative effects on job performance as well as social and domestic interaction. Decreased alertness threatens individual and public safety, thus shift work related sleep deprivation also becomes a public health concern.
- 2) Gastrointestinal disorders: Nearly 75% of night workers (compared to 20% of day workers) complain of loss of appetite, constipation, dyspepsia, heartburn, abdominal pain, and flatulence.<sup>4</sup> A higher inci-

dence of gastritis and peptic ulcer disease is found in shift workers. Many gastrointestinal problems do not become evident until five years after starting shift work. Night workers are prone to eat foods high in sodium and fat and are more likely to consume caffeine, alcohol, and tobacco in attempts to regulate their sleep/wake cycles. Disturbances of the circadian cycle of enzyme secretion and gastric acidity and psychological stress associated with shift work may also contribute.

- 3) Ischemic disease: An increased incidence of ischemic heart disease has consistently been found in night workers compared with day workers. Knutsson et al<sup>6</sup> demonstrated a dose-response relationship where there was a 40% increased risk of ischemic heart disease in both men and women shift workers. Shift workers had higher serum triglyceride and cholesterol levels that could not be explained by obesity, smoking, or alcohol intake, but which might be related to dietary habits.
- 4) Reproductive health: Several studies indicate that female shift workers have increased risks of infertility, spontaneous abortion, pre-term labor, premature childbirth, and low birth weight children.<sup>7,8</sup>
- 5) Exacerbation of pre-existing medical conditions: Irregular schedules or night work may aggravate certain medical conditions. Shift work leads to additional risk factors for developing cardiovascular disease and hypertension. Shift work exacerbates glucose levels in insulin-dependent diabetics. Alteration of the sleep cycle leads to increased seizure frequency in epileptics since sleep deprivation lowers the seizure threshold. Migraine sufferers are more likely to experience recurrences. Chronic asthmatics may experience more symptoms at night because peak bronchial reactivity occurs between 4 and 7 am.
- 6) Psychiatric disorders: For those with difficulty adapting, chronic circadian dysrhythmia is associated with increased depressive symptoms, as well as clinical depression requiring treatment or hospitalization. It may trigger manic episodes in bipolar patients.<sup>8</sup>
- 7) Psychosocial disruption: Shift work and circadian dysrhythmia disrupt normal social interactions, leading to isolation from family, friends and the community. Irregular schedules make it difficult to fulfill parenting responsibilities and can cause a significant strain on a marriage. Studies indicate that shift work is associated with a higher incidence of divorce, family violence, social isolation, and sexual dysfunction.<sup>8</sup>
- 8) Safety: Studies suggest that night workers suffer a drop in alertness between 2 and 4 am, the circadian nadir, which corresponds to the time during which most patient errors and injuries occur. A study

at Stanford showed that EPs on night shifts were slower at manual tasks and more likely to commit errors as their shifts progressed. They rated themselves as more fatigued, less thoughtful, and more sleep-deprived compared to the day shift physicians.<sup>9</sup> In addition, increased motor vehicle accident rates have been reported in shift workers traveling to and from work.<sup>5</sup>

### ADAPTING TO SHIFT WORK: IS IT FOR YOU?

Individuals vary in their ability to adjust to shift work. Those who work shifts by choice for reasons such as schooling, childcare, or pay differential are likely to adapt more easily. Others suffer from "shift work intolerance." They are unable to synchronize their internal circadian rhythms with an imposed external environment, resulting in gastrointestinal complaints, interpersonal relationship difficulties, problems with the use of drugs and alcohol, decreased job performance, and increased accident rates. Risk factors for shift work intolerance include age over 40 (even in physicians who previously tolerated shift work), extremely early risers, rigid sleep requirements, living with others on a day schedule, and a history of poor tolerance to circadian disruption.

### SCHEDULING STRATEGIES

There are many creative ways to schedule physicians that lessen the negative impact of shifts. The best by far is to stay on the same shift. This requires one to follow the same activity schedule when not at work. For those working continuous night shifts, this requires daytime sleep and nocturnal wakefulness even on days off. A generous pay differential is one way to reward those who are willing to work the less appealing shifts. The least advantageous schedule is a random one. Scheduling without concern for timing of shifts leads to extensive circadian disruption and fatigue.

Since the gold standard of working the same shift is not practical in EM, other strategies have been adopted. Working a block of night shifts greater than two weeks is another method to reduce circadian disruption. Additionally, working only one or two nights in a row can allow one to sleep before and after the night shift and decrease the negative impact. One arrangement that is popular is to work an 8-day cycle: 2 days, 2 evenings, 1 night followed by 3 days off. This results in a 35-hour workweek. A more strenuous schedule is a similar arrangement in a 7-day cycle: 2 days, 2 evenings, 1 night followed by 2 days off. This is a 40-hour workweek.

### COPING STRATEGIES

EM is a mentally and physically demanding job, which is compounded by the negative effects of chronic circadian dysrhythmia. Several strategies have



been proposed in an effort to mitigate fatigue and decreased alertness at work. Bright lights have been used during night shifts to improve alertness and performance. Dark rooms or eye masks and earplugs should be used for sleeping during the day. White noise machines may help. Family and friends need to help limit disturbances during daytime sleep. Napping during shifts (when allowed and appropriate) also seems to be restorative.

Research suggests that moderate and regular physical exercise leads to an increase in sleep length and nighttime alertness. Exercise also improves overall health and reduces stress. Eating a balanced diet and maintaining regular meal times during the waking period is recommended. Using caffeine strategically between 2 and 4 am can improve nocturnal alertness. Avoiding caffeine, nicotine, and alcohol near bedtime is equally important. The ability to reset the biological clock to a new shift may be enhanced by bright lights as well as melatonin, a hormone naturally secreted by the pineal gland in response to darkness. The potential value of melatonin in helping to reset the biological clock is currently under study. Planning for quality social time is equally important. Scheduling social activities with family and friends around your erratic schedule leads to happy and mentally healthy physicians.

Particular individuals, such as those with a history of insomnia, depression, frequent indigestion, excessive family responsibilities, long commute to work, and family instability, may find shift work especially unpleasant or difficult. If you have certain underlying medical conditions (insomnia, epilepsy, asthma, coronary artery disease, gastrointestinal disorders, diabetes, hypertension, or depression), night work may not be medically advisable. If you fit these criteria, and/or you struggled to adapt to the rotating shift schedule during your EM rotation, you may want to consider a different specialty.

Utilizing coping strategies and placing importance on one's well-being can lead to a long and fulfilling career in EM. Residency programs can promote residency well-being by including wellness topics in the curriculum and providing an equitable work schedule for EM residents. If you are a true morning person or cannot handle shift changes well, seek a position where night shifts can be limited in number. Ultimately, you will want to choose a practice environment that respects circadian principles, not only for quality of care and patient safety, but also for improved personal and professional longevity and satisfaction.



## References:

- 1) McNamara RM. Physician wellness from emergency medicine. *EMedicine J.* 2001;2.
- 2) American College of Emergency Physicians. Emergency physician shift work. *Ann Emerg Med.* 1995;25:864.
- 3) Kuhn G. Circadian rhythm, shift work, and emergency medicine. *Ann Emerg Med.* 2001;37:88-98.
- 4) Green-McKenzie J, Behrman AJ. Circadian rhythms and emergency medicine practice. *EMedicine J.* 2001;2.
- 5) Whitehead DC, Thomas H Jr, Slapper DR. A rational approach to shift work in emergency medicine. *Ann Emerg Med.* 1992;21:1250-8.
- 6) Knutsson A, Akerstedt T, Jonsson B, et al. Increased risk of ischemic heart disease in shift workers. *Lancet.* 1986;2:89-92.
- 7) Nurminen T. Shift work and reproductive health. *Scand J of Work, Environ and Health.* 1998;24 Suppl 3:28-34.
- 8) Scott AJ. Shift work and health. *Occupat and Environ Med.* 2000;27;4.
- 9) Smith-Coggins R, Rosekind MR, Hurd S, Buccino HR. Relationship of day versus night sleep to physician performance and mood. *Ann Emerg Med.* 1994;24:928-34.

## 32

Burnout in  
Emergency Medicine

## RESIDENT AUTHOR:

Sachin J. Shah, MD (Jacobi/Montefiore Medical Center at Albert Einstein, New York)

## FACULTY AUTHOR:

David K. Wagner MD, FAAEM, FACEP (Medical College of Pennsylvania/Hahnemann University, Philadelphia)

## FACULTY EDITOR:

Micelle J. Haydel, MD, FAAEM (Louisiana State University, New Orleans)

Much attention has been given to the issue of *burnout* in Emergency Medicine (EM) and its effect on the specialty, as well as on individual careers.<sup>1</sup> However, are you more likely to *burnout* in EM than in another medical specialty or in another career?

Any career is susceptible to burnout, as is any person. However, are emergency physicians (EPs) more susceptible to burnout than other physicians? Much of the burnout in EM was reported in the early years of the specialty, with more recent studies reporting that the attrition rate over 5 and 10 years appears to be no greater than that of the average medical specialty. The same factors that lead to burnout in other fields play a role in EM. Issues such as stress, both work-related and at home, working conditions, financial concerns, and overall satisfaction enter into a person's ability to cope and to enjoy his or her career. More unique to EM are rotating work schedules, high-acuity patients, and patients frustrated with long wait-times. Awareness of potential stressors and development of coping strategies during medical school and residency lays the groundwork for a full and gratifying career.

### STRATEGIES AGAINST BURNOUT

While burnout is a real issue in all of the medical specialties, we can learn from our more experienced, more senior EP predecessors how to effectively deal with stressors and enjoy long-lasting careers in our exciting specialty.

The easiest thing to say, but often the most challenging to do, is to find a satisfying position. Whether in an academic center or a community hospital, in an urban or rural setting, overall job satisfaction equips you to deal with the daily stressors inherent to our field.<sup>1-3</sup>

Whether you are considering a residency spot or a practice position with an EP group, carefully consider location, patient population, and personal factors. Not everyone works well with the poor, uninsured patients found in inner-city hospitals; and conversely, affluent patients and their primary physicians can

be equally challenging.

The quality and character of your colleagues also play a large role in the level of stress in the work environment. Seek out an environment that fosters teamwork and growth, and avoid those with low morale and discontent. Working with EPs who carry a comparable clinical load during the shifts you share with them, who share the non-clinical load and undesirable shifts and obligations associated with the group practice<sup>4</sup>, who compensate you adequately for any supplementary commitment to or sacrifice for the welfare of the group, and who provide you with equal opportunity, respect, appreciation, administrative input and open-disclosure about the ins-and-outs of the ED contract and the institution, will certainly play a major role in helping you avoid burnout.<sup>1-5</sup>

Most EPs are fortunate enough to have a fair amount of free time outside of the ED. This free time can be critical to the quality of your life and your career. Hobbies, athletics, intellectual pursuits, and charity endeavors can help form a balance between career and life. In addition, physical fitness helps the body cope with frequently changing shift work.

Sleep hygiene is an often overlooked, yet critical component to survival in EM. An effective strategy to deal with the rotating shifts is mandatory to enjoy longevity in the field. Different methods and ideas exist to deal with shift work, but they all share the same goal: adequate, high quality sleep. This is discussed in a separate chapter in this textbook (Chapter 31: "Shift Work in EM"). Many physicians have a "dark room" in their home, where noise and light cannot penetrate and they are ensured uninterrupted sleep. Others take advantage of a call room at the hospital and sleep immediately after their night shift for a few hours before going home.

While EPs enjoy comfortable salaries, financial concerns nevertheless do come into play. The high debt burden incurred in medical school makes the idealized post-residency lifestyle often difficult to realize. This may lead to EP graduates seeking to work additional shifts other than what is required for a full-time position, or securing a higher paying, but less fulfilling position. However, both of these strategies can lead to burnout. Instead, consider advanced financial planning, develop a workable budget, and determine realistic expectations. Long-term planning minimizes short-term crises.

The challenge of having a healthy family life, while enjoying a fulfilling career, is something that EPs face every day. Just as with any career, family obligations must be balanced with career goals, and sacrifices are made on both ends. In exchange for more free time, EPs work more nights, weekends and holidays than any other physicians. This equates to time away from family and friends when they have a day off from work or school.

By far the greatest potential source of stress for an EP is the workplace

itself. Overcrowding, safety, nursing issues, consultant problems, medicolegal concerns, and managing high-acuity patients are factors that are dealt with daily in the ED. As patients get older, sicker and more disillusioned with primary care medicine, they are turning to the ED for their routine health issues. This leads to nationwide overcrowding, as well as increased waiting times.<sup>6</sup>

Nursing shortages are having a negative impact on patient care in the ED. EPs find themselves performing nursing tasks in order to expedite patient care. In some instances, this may instill a sense of teamwork in the ED. However, it is more often frustrating and distracts a physician from critical patients.

Perhaps one often-overlooked stress-harboring factor is the high task load associated with every patient encounter, and the continuing rise in patients seen per hour of EP coverage.<sup>7-10</sup> While this latter factor maximizes the revenue for the group and often (but not always!) for the EP, it directly impacts the quality of the EP experience during and following any shift. It leaves no "down-time" in between patient encounters, and reduces the time available for relaxed patient encounters and management.<sup>9,10</sup> This certainly means considerable additional stress. This is even more alarming when one considers the rising number of tasks associated with each patient encounter due to the cost-driven reduction in ancillary support and administrative demands to improve communication, documentation, billing and quality control.<sup>10</sup>

In summary, burnout is found in all fields of medicine, but is best treated by prevention. When securing a position, be aware of potential stressors and determine in advance your best approach in order to prevent burnout. Develop hobbies or activities that help you "de-stress". Most of all remember that even during residency, finding a balance in your life should be a priority.

## References:

- 1) Doan-Wiggins L, Zun L, Cooper MA, Meyers DL, Chen EH. Practice satisfaction, occupational stress, and attrition of emergency physicians. *Acad Emerg Med.* 1995;2:556-563.
- 2) Simon RR. Entrepreneurism in emergency medicine. *Ann Emerg Med.* 1983;12:722.
- 3) Kazzi A. Give emergency medicine true departmental control. *West J Med.* 2000; 172:388-389.
- 4) Kazzi A, Patterson S, Langdorf M, and Young G. The CAL/ACEP workforce taskforce registry: physician administrators and equitability of distribution of undesirable shifts. *Ann Emerg Med.* 2000;36, Part 2:5-9.
- 5) Plantz SH, Kreplik LW, Panacek EA, et al. A national survey of board-certified emergency physicians: quality of care and practice structure issues. *Am J Emerg Med.* 1998;16:1-4.
- 6) Richards J, Navarro M, Derlet R. Survey of directors in emergency departments in California on the presence and causes of overcrowding. *West J Med* 2000;172(6):388-389.
- 7) Graff LG, Wolfe S, Dinwoodie R, Buono D, Mucci D. Emergency physician workload: a time study. *Ann Emerg Med* 1993;22:1156-1163.
- 8) Kazzi A, Blasko B, Langdorf M, and Young G. The California/ACEP Workforce Taskforce: A longitudinal 1-year California Emergency Medicine Workforce Registry. *Acad Emerg Med* 1998;5(5):460.
- 9) Kazzi A, Peng A, Langdorf M. Orange County California Report on Five-Year Trends in the ED Safety Net. *Acad Emerg Med* 2001;8(5):570.
- 10) Scaletta T, What is a reasonable clinical workload? *Common Sense*, Vol. 6, Issue 5, Sep/Oct 1999.



## Emergency Medicine Organizations and Certifying Bodies

### RESIDENT AUTHOR:

Jeannie Tsai, MD (University of Southern California, Los Angeles)

### FACULTY AUTHORS:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine) & Ramon W. Johnson, MD, FACEP, FAAEM (Mission Hospital Regional Medical Center, Mission Viejo, California)

### FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

Beginning in 1961, the medical staff and administration of hospitals across the USA recognized the need to schedule physicians to provide around-the-clock emergency medical care. This was a natural response 1) to the rapidly rising number of patients who were presenting to the hospital emergency reception area and 2) to an escalating public pressure for timely and proficient comprehensive care. Seven years later (1968), physicians who heeded the call to staff the nation's emergency departments (EDs) got together and established the first emergency medicine (EM) organization in the world: the American College of Emergency Physicians (ACEP). Two years later in 1970, the University Association for Emergency Medical Services (UA/EMS) was born, followed by the Society of Teachers in Emergency Medicine (STEM) in 1975. These two later merged in 1989 to form the Society for Academic Emergency Medicine (SAEM). The American Board of Emergency Medicine (ABEM) was incorporated in 1976, at which time UA/EMS and ACEP submitted an application for primary board certification status to the American Board of Medical Specialties (ABMS). This was met by fierce opposition by other specialties who voted 100 to 5 in 1977 to reject the request. Our founders did not give up and managed, through a blend of additional bold maneuvers and proactive negotiations, to get ABEM formally recognized in 1979 as one of the certifying bodies and in 1989 as a primary board of the ABMS. This was an historical milestone for EM as it delineated its official recognition as the 23<sup>rd</sup> primary specialty.

In 2002, students who are contemplating an EM career will encounter other organizations and acronyms of importance to the specialty: the American Academy of Emergency Medicine (AAEM), the Council of Residency Directors (CORD), the EM Resident Association (EMRA), the AAEM Resident Section (AAEM/RES), the Residency Review Committee (RRC), the National Associa-

tion of Emergency Medical Services Physicians (NAEMSP), the World Association for Disaster and Emergency Medicine (WADEM), and many others, some national and others international.

The establishment and growth of EM organizations is no doubt one of the pivotal steps and principal signs of health and maturity in the development of emergency medical care, training and education. It is through such organizational activity that emergency physicians (EPs) can ensure the effective, professional and lasting development of EM, handle routine matters such as continuous medical education, and resolve conflicts when they arise. EM organizations provide the necessary attention to the diverse number of basic, routine and controversial issues that confront our patients, the delivery systems of emergency care and the specialty of EM.

It is simply impossible for us to describe in detail all of the EM organizations, and we shall, therefore, provide limited information that we feel will be of interest to you. This chapter lists a number of national and international organizations and bodies of relevance to EM. We also briefly describe some of them and provide contact information for others. Organizations are listed alphabetically within each category. We apologize if we were unable to include every EM organization out there. Note that some of the information we provide may have changed by the time you read this chapter. Refer to the referenced web site address for up-to-date detail pertaining to individual organizations.

## NATIONAL ORGANIZATIONS (USA):

### I. The American Academy of Emergency Medicine (AAEM)

- Year formed: 1993
- Website: [www.aaem.org](http://www.aaem.org)
- Phone number: (800) 884-2236
- Journal Affiliation: *Journal of Emergency Medicine (JEM)*

#### ➤ Membership Categories and Annual Dues:

All membership categories include free registration to an annual 3-day multiple-track scientific Assembly. This is unique among other EM organizations, who typically charge \$300-600 for registration to the annual scientific assembly. State membership is separate and not mandatory.

- Full active: \$315 - Note that there is no initial application fee.
- Associate: \$195 (non-voting)
- State chapter dues vary and are typically \$60-100. Members can belong to the state chapter without belonging to national AAEM and vice versa.

- Student dues: \$50 (with *JEM*)
- Student 1<sup>st</sup>-year Trial: Free (without *JEM* subscription)
- Resident dues: \$50 (multiple-year discount program is also available)
- International: \$195 (non-voting)
- Honorary: Free (for individuals AAEM wishes to recognize)
- Emeritus (retired): \$175 (disability or age > 65 + AAEM member > 3 years)

➤ **Full Active Membership Requirements:**

Since its inception, to be a full active voting member of AAEM, a physician must be certified in either EM (by ABEM or AOBEM) or Pediatric EM (jointly administered by ABEM and the American Board of Pediatrics).

- Full active members are the only members who can vote and run for office.
- It is unethical in AAEM to discriminate between board-certified EPs based on whether such certification was achieved through EM residency training or the practice track that was available until 1988.
- The maintenance of board certification is a requirement for active membership.

➤ **Fellowship Requirements:**

This is identified by the "FAAEM" that follows the title of "MD" or "DO" on an EP's business card or CV.

- AAEM's only requirement for fellowship status is EM board certification and its maintenance. Active membership is required. There are no application or maintenance fees. AAEM also does not require continuously maintaining membership to grant its active members the privilege of maintaining their FAAEM fellowship status.

➤ **Goals and Objectives:**

- AAEM is dedicated to delivering the highest quality emergency care to the public. AAEM believes this can be provided by an *EM specialist*, which can be established only through board certification, by either ABEM or American Osteopathic Board of Emergency Medicine (AOBEM).
- AAEM is also committed to the personal and professional welfare of EM specialists. AAEM's concern with practice conditions in EM and the EP's well being remains its most distinguishing feature among EM organizations. **The organization is dedicated to promote and support fair and equitable practice environments.** This goal and the promotion of EM board certification constitute the original and primary basis for the foundation of AAEM in 1993.



AAEM believes these two objectives are essential to allow EPs to deliver the highest quality of patient care and to avoid physician burn-out. AAEM strongly opposes groups 1) where EPs are forced to waive the right to due process and membership in the medical staff, 2) where the EP is not allowed to see what was billed, collected and spent on management expenses and salaries, and 3) where control over practice conditions and income stream is controlled by lay entities, or sold as a commodity.

AAEM also opposes tactics that result in the hiring of unqualified physicians or physician extenders (nurse practitioners and physician assistants) to practice EM independently and without adequate supervision, strictly because they are willing to work for less pay, which maximizes the group or contract holders' net profit. AAEM believes these types of providers are not qualified for the independent practice of EM. AAEM believes that their use, in this day and age, should be adequately supervised, onsite and in real-time, by EM boarded EPs, and limited to areas where a shortage of EM board-certified EPs persists.

Since its inception, AAEM has held an outstanding annual scientific assembly, every winter, as well as multiple regional oral and written board review courses. It organizes excellent workshops with topics that include EM ultrasound training, advanced airway management, computed tomography reading, pediatric procedures, Microsoft PowerPoint presentations, and information technology. With an unparalleled growth in membership of nearly 10% per year, AAEM is establishing new educational programs, committees and taskforces. This includes a government services chapter, and an educational 4-day annual conference that AAEM is jointly sponsoring with academic leaders in the Government Services. One recent AAEM landmark activity has been the development of the biennial Mediterranean EM Congress, which it organizes in partnership with the European Society for EM (EuSEM). The first was held in Stresa, Italy, in September 2001. The second is scheduled for September 2003 in Barcelona, Spain, and will be bringing several other US and international EM organizations together, as co-organizers and co-sponsors, making this Congress a true celebration of unity and diversity and a manifestation of the bright future of our specialty.

## **II. The AAEM Resident Section (AAEM/RES)**

- Year formed: 1999
- Phone number: (800) 884-2236

- Web Site: [www.aaem.org](http://www.aaem.org)

AAEM/RES is a structured section of the AAEM, which brings together all residents, students and fellows who belong to AAEM. For individuals belonging to any of these last 3 categories of trainees who are bound to or interested in a career in EM, membership in AAEM automatically means membership in the AAEM/RES. AAEM strongly supports its resident section, promoting resident and student membership through various free or discounted benefits and resident-focused or -driven activities.

AAEM/RES addresses issues of interest to residents, students and fellows. It organizes them into a structured entity, with democratically elected representatives who develop activities and products such as this textbook, engage in collaborative efforts with other organizations, and provide exceptionally important input to the AAEM board of directors.

AAEM/RES supports and shares the mission statement and vision statement of AAEM. Its primary commitment is to inform residents, students and fellows about the practice environment, specifically about contract management groups, corporate schemes, contract issues, moonlighting, and current governmental policies that affect graduate medical education.

Unprecedented in organized EM, AAEM decided to provide a full voting position on its board to the President of the AAEM Resident Section. Through direct participation in the AAEM board activities, meetings, committees and executive sessions, the AAEM/RES President not only represents the residents' and the section's voices, but he/she also holds a full voting seat and membership in the main AAEM board of directors. This provides direct valuable input into the deliberation and decision-making that affects the future of EM residents. The residents' perspective on various issues is not only heard; it is counted. All members of the resident board must be residents except for the fellow (who has finished an EM residency) and the medical student (who can be any student interested in EM).

### III. American College of Emergency Physicians (ACEP)

- Year formed: 1968
- Web site: [www.acep.org](http://www.acep.org)
- Phone number: (800) 798-1822
- Journal Affiliation: *Annals of Emergency Medicine*

➤ **Membership Categories and Annual Dues:**

- Full Active: \$515, \$30 application fee (plus state membership dues)
- State chapter dues vary and are typically \$150-300, with a range of \$0-350 listed. Members must pay their state dues in addition to the \$515 dues for national ACEP membership. They cannot belong to one without belonging to the other.
- Candidate:
  - Student dues: \$55 for both ACEP and EMRA
  - Resident/fellow dues: \$90 for both ACEP and EMRA
  - Resident, fellow and student membership in ACEP mandates membership in EMRA. They cannot belong to one without belonging to the other.
- Transitioning EM residency graduates: for the first 3 years, it provides an initial discount for active membership.
- International (\$129) and Canadian International (\$386)
- Retired (172\$ plus state): they must be either disabled or over 55 years, retired from medical practice and ACEP members for at least 20 years.

➤ **Full Active Membership Requirements:**

- As of January 1, 2000, new full active members had to be either EM residency-trained or board certified in EM by an "ACEP-recognized certifying body." As of August 2002, ACEP-recognized certifying bodies are limited to AOBEM and ABEM.
- Anyone who was an ACEP full active member before January 1, 2000, retained the ability to vote and to run for office, irrespective of whether or not they completed any type of residency training or were ever board certified in any specialty.
- The maintenance of board certification is not a membership requirement for full active status.

➤ **Fellowship Requirements:**

This honorary title is identified by the "FACEP" that follows the title of "MD" or "DO" on an EP's business card or CV.

- EM board certification by an "ACEP-recognized certifying body"
- ACEP membership maintenance for a minimum of 3 continuous years
- A number of other requirements demonstrating a minimum of 3 years of full-time practice, as well as active involvement in the specialty (e.g. teaching, administration, research, organized EM, etc.)
- Requires continuously maintaining membership, renewal every 10 years, and an \$800 application fee.

➤ **Objectives:**

With 53 chapters, 22 sections and around 21,000 members in 2002, ACEP is the largest organization representing EPs and is headquartered in Dallas, Texas. Since its inception, ACEP has held the largest annual scientific assembly. Held every October, this assembly currently constitutes the largest gathering of EPs. National ACEP, as well as its chapters, organize or co-sponsor additional regional oral and written board review courses, annual conferences, and excellent workshops that include a wide variety of topics. ACEP maintains a significant legislative presence in Washington, D.C., which includes an official office and a number of full-time employees based in the nation's capital. Besides the American Medical Association (AMA) who spends nearly 20 million dollars on lobbying efforts in DC, ACEP and the American College of Physicians (the internists) likely represent the two professional medical organizations that allocate the most (1.2-1.5 million dollars per year) to political activity in the capital. The organization exists to support quality emergency medical care and to promote EPs' interests. With regard to practice issues, provider qualifications, fairness and well-being, ACEP brings together many visions, players, interests and trends. Concerned with divisiveness and anti-trust issues, ACEP chooses to limit or avoid assertive or negative action or policies that favor the view of one of its constituents over another. ACEP lists as its goals the support of advocacy, education, research, professional practice, communications and organizational viability. 3

**IV. American College of Osteopathic Emergency Physicians (ACOEP)**

- Year Formed: 1975
- Phone number: (312) 587-3709 or (800) 521-3709
- **Web site:** [www.acoep.org](http://www.acoep.org)
- **Membership Categories and Annual Dues:**
  - Full Active: \$450 + \$50 application fee  
Note that it is available to any person, duly licensed as a Doctor of Osteopathic Medicine who is primarily engaged in the practice or administration of EM medicine for three or more years, or has successfully completed an AOA- or ACGME-approved EM residency. Board certification in EM is not required.
  - Associate: available to any person not meeting criteria for *active* membership who has a sincere interest in EM and the College.
  - Resident or intern: respectively, enrolled in an AOA-approved EM program or in any internship with a "sincere interest in EM."
  - Student: enrolled in an AOA-approved College of Osteopathic Medicine, with an interest in EM.

- Resident and student dues are not listed on the website or application.
- Honorary, Life and "Active Member - Exempt" (e.g. retired): these are nominated positions. Contact the ACOEP Executive Director for information.
- **Goals and Objectives:**  
ACOEP supports quality emergency medical care, promotes the interest of osteopathic EPs, education and practice of osteopathic medicine. It was founded in 1975 by a group of osteopathic physicians interested in establishing a specialty affiliate within the structure of the AOA.
- **Fellowship Requirements:**  
This honorary title is identified by the "FACOEP" that follows the title of "DO" on an EP's business card or CV.
  - EM board certification by AOA or ABEM
  - ACOEP membership maintenance for a minimum of 5 continuous years prior to nomination
  - Attendance at a certain number of ACOEP membership meetings, and
  - Documentation of high professional standing in EM, such as a residency program or College of Osteopathic Medicine (COM) involvement, and publication of articles in nationally circulated periodicals

## V. Association of Emergency Physicians (AEP)

- Year Formed: 1993
- Phone number: (800) 449-4237
- Web site: [www.aep.org](http://www.aep.org)
- Membership dues: \$175
- Resident and student dues: Free
- **Goals and Objectives:**

AEP membership is available to "all practicing emergency physicians, regardless of residency training and/or board certification status who are dedicated to the provision of high quality, compassionate emergency medical care."

Previously called Association of Disenfranchised Emergency Physicians (ADEP), this organization was formed with the goal of re-opening EM board certification for physicians who have not been residency-trained in EM. This organization feels that any physician should be able to practice emergency medicine and receive ABEM board certification through the "practice track," even if they never completed any residency training. Whether they 1) were forced out of training in any medical specialty, 2) failed to completed the requirements to sit for any existing legitimate board, 3)

failed to complete the requirements for any form or duration of residency training, The 'practice track,' which was closed in 1988, required the documentation of 7,000 hours of full-time EM practice which also had to be completed within a 5 year-period.

In a 1995 membership survey, nearly 62% of the AEP members had completed a residency, mostly in family practice or internal medicine; 38% had not completed a residency. About half of the AEP members are ABMS-certified in a specialty other than EM. AEP fully supports the Daniels versus ABEM lawsuit.

In 1990, Gregory Daniels, a physician who completed three years of residency in general surgery, and was practicing EM in Buffalo, NY, filed suit against ABEM. He alleges that the closing of the EM practice track was an illegal conspiracy to enhance the economic position of board certified EPs and that ABEM and the co-conspirators has an individual personal economic interest and stake in the success of the conspiracies and schemes. Daniel alleges that ABEM and others conspired to create an artificial shortage of ABEM certified EPs and thereby to manipulate the marketplace. *The case remains in litigation as of this date.*

AEP publishes a quarterly newsletter and the AEP Journal publication. It does not organize a scientific assembly and cannot provide CME for educational activities.

#### **VI. Council of Residency Directors (CORD)**

- Phone number: 517-485-5484
- Web site: [www.cordem.org](http://www.cordem.org)
- Membership: available to programs and not to individuals
- **Goals and Objectives:**

CORD is an organization that is comprised of member programs, not individuals. Each program has one vote and a maximum of three pre-designated representatives. These are typically the residency director, associate residency director, and chair, based on a decision which is made at the level of the individual programs. Occasionally, the selection includes the director of medical student education or clerkship.

CORD focuses on issues relevant to improving specialty training and education in the allopathic EM residency programs throughout the USA. Aiming to improve the quality of emergency medical care, CORD's mission includes the establishment and maintenance of high standards of excellence in emergency medical training, the enhancement of the quality of instruction in EM training programs, and the improvement of communications between faculty members of various EM training programs. CORD holds two outstanding half-day assemblies every year, provides an excep-

tional newsletter and electronic e-mail list service, and an outstanding website with a number of valuable educational products. They include a question and answer database, a bank of useful clinical images and photographs, and a unique searchable ECG tutorial. CORD organizes a national annual conference to promote academic development of EM faculty and educators (Navigating the Academic Waters") as well as various other workshops, including for example an annual program to orient and train new or soon-to-be residency directors. Most of all, CORD provides a "think tank" and representation for EM educators and residency programs. In October 2002, CORD will be considering opening its membership to osteopathic and international EM programs, in an effort to promote exchange and collaboration in the development of educational standards in our specialty.

### **VII. Emergency Medicine Residents Association (EMRA)**

- Year formed: 1974
- Membership dues: \$90 (includes required ACEP membership)
- Student dues: \$55
- Alumni dues: \$45
- Phone Number: (800) 798-1822
- Web Site: [www.emra.org](http://www.emra.org)

EMRA is the largest and oldest resident organization. Membership categories include active (residents and fellows), students, international, representative, alumni, honorary and life.

EMRA's mission includes serving residents, fellows, and medical students pursuing EM through education, communication, networking, representation to other organizations, and promoting research. Each year, EMRA conducts a large membership meeting, which includes job fairs, panel discussions, student forums, receptions, elections, resolutions, and a number of other valuable activities. This occurs in conjunction with the ACEP Annual Scientific Assembly in October. Through the rest of the year, EMRA also organizes a number of other activities, including panels and seminars, and provides a mentorship program.

EMRA provides official representation for EM residents to the RRC and to the ACEP. Through its official liaison to ACEP, EMRA maintains non-voting presence during the activities and meetings of the ACEP Board of Directors. EMRA provides residents and students with a number of educational products, many of which have consistently received outstanding reviews for their usefulness and quality.

EMRA and ACEP work very closely together. EMRA's offices are located within the ACEP headquarters and ACEP provides administrative



and financial support. EMRA pays ACEP for the administrative support it receives. ACEP also provides EMRA several opportunities to participate in all of its committees and taskforces, in the annual roundtables and *Council* meeting, and in its important steering and reference committees. EMRA also is provided with voting authority during the annual ACEP Council meeting, through a select number of resident-councilors.

EMRA provides residents, fellows and students several leadership opportunities. It is led by a board of directors, a representative council (with a speaker and vice-speaker), and officers who include a president, president-elect/treasurer, immediate past-president and secretary. These leadership positions are filled by elections held by the council of EMRA representatives, who themselves are elected by resident members in individual programs.

#### **VII. Society for Academic Emergency Medicine (SAEM)**

- Year formed: 1988
- Web site: [www.saem.org](http://www.saem.org)
- Phone number: (517) 485-5484
- Journal Affiliation: *Academic Emergency Medicine*
- **Membership Categories and Annual Dues:**
  - Active: \$365 + \$25 initiation fee - For "individuals with an advanced degree (MD, DO, PhD, PharmD, DSc or equivalent) who hold a university appointment or are actively involved in Emergency Medicine teaching or research."
  - Associate: \$350 + \$25 initiation fee - For "health professionals, educators, government officials, members of lay or civic groups, or members of the public who have an interest in Emergency Medicine."
  - Student dues: \$75 + \$25 initiation fee
  - Resident or Fellow: \$90 + \$25 initiation fee
  - International: there is no separate international membership category. However, international members can join SAEM. SAEM also has an international EM interest group.
- **Goals and Objectives:**

SAEM is an EM organization that focuses on academic issues, research, education, and health policy. SAEM is the academic voice of EM, bringing together nearly 5,000 members from medical schools and teaching institutions in the US and the rest of the world. Its mission is to improve patient care by advancing research and education in EM. EM resident and student memberships are available and strongly encouraged by all in the academic EM community. Resident members elect a resident representa-



tive to the SAEM board of directors who participates in all activities and discussions at the leadership level.

SAEM membership provides residents and students with invaluable exposure and opportunity to a wide variety of exceptional resources pertaining to EM research and education. Most EM faculty and certainly the authors of this textbook cannot emphasize strongly enough the importance of resident and student membership and participation in SAEM.

SAEM organizes a scientific assembly in May of every year, which brings together the largest gathering of academicians and educators in EM. The quality and value of the program is exceptional, with a research and educational focus that you will find inspiring. For the last 5 years, SAEM also has been sponsoring successful annual regional meetings that bring together the academicians, educators, residents and students of programs from predefined geographical areas (e.g. Western, Midwest, etc.). Students, residents and junior faculty learn how to develop their presentation skills. They also get an additional opportunity to advance academic EM and to learn about its issues and opportunities.

Essentially, the SAEM national scientific assembly and regional research forums provide exceptional networking opportunities for students, residents, fellows, researchers and faculty. The national and regional SAEM medical student forums are among the best opportunities for EM applicants and for students considering a career in EM to learn about the application process and about various programs around the country. Do not miss them! This is the time for you to explore and understand academic EM.

In addition, SAEM publishes one of the main peer-reviewed journals of the specialty: *Academic Emergency Medicine (AEM)*. *AEM* has unprecedented research and educational focus, which students, residents and faculty will find most useful and inspiring.

Last but not least, SAEM also provides several other valuable products to students, residents and faculty. They include the student virtual advisor program, the residency catalogue, the residency vacancy listing, the SAEM newsletter, various interest groups (Medical student educators, international EM, EMS, etc.) and a number of research grants that are selectively available to students, residents and junior faculty. What are we saying to students, residents and faculty? Well, whether you are interested in an academic or non-academic career in EM, you need to learn, explore and understand EM education, research and academics. Join SAEM!

NATIONAL CERTIFYING, LICENSING AND ACCREDITATION  
BODIES**I. American Board of Emergency Medicine (ABEM)**

- Phone number: (517) 332-4800
- Web Site: [www.abem.org](http://www.abem.org)

The mission of ABEM is "to protect the public by promoting and sustaining the integrity, quality, and standards of training in and practice of Emergency medicine." ABEM is recognized by the ABMS as a primary medical board for certification in the specialty of EM. ABEM also offers subspecialty certification in pediatric EM, medical toxicology, and sports medicine. ABEM constructs, administers, and scores EM certification examinations. Each February, ABEM distributes and scores the EM in-service exam for all allopathic EM residents in the USA. The exam consists of over 200 multiple-choice questions, incorporates visual images, and is used as an evaluation of residency performance. Consistent with other ABMS-approved specialties, ABEM certification requires candidates to complete an ACGME-accredited EM residency. Full ABEM certification requires passage of a written examination, followed by an oral examination. Currently, ABEM requires re-certification every ten years, which consists of taking a written exam. The Emergency Medicine Continuous Certification (EMCC) program is currently under development. It involves verification of professional standing, continuous education and self-assessment, rigorous evaluation of core knowledge, and evidence of successful practice in EM. EMCC may be required as early as in 2003.

**II. American Osteopathic Board of Emergency Medicine (AOBEM)**

- Phone number: (312) 335-1065
- Web Site: [www.aobem.org](http://www.aobem.org)

AOBEM is one of two certifying bodies that are recognized by AAEM and ACEP. AOBEM is an affiliate board of the American Osteopathic Association (AOA). AOBEM offers specialty board certification for osteopathic physicians practicing or training in EM. AOBEM offers subspecialty certification in toxicology and emergency medical services. AOBEM requires candidates to be osteopathic physicians and AOA members. Since 1989, AOBEM requires EM residency training for eligibility to sit for the EM board certification exam. It maintains a practice track; however, this is limited to physicians who can demonstrate full-time EM practice for 7 consecutive years that must have begun before 1986. Special consideration is still extended to applicants with AOA-approved training in other specialties than EM, with the determination of eligibility left under strict scrutiny by the leadership of the AOA and AOBEM. AOBEM certification includes a written examination, oral examination, and a clinical examination. It requires re-certification every 10 years for those physicians who have been certified after January 1, 1994.

### III. Board Certification in Emergency Medicine (BCEM)

- Phone number: (800) 447-9397
- Web Site: [www.aapsga.org/boards/index.html](http://www.aapsga.org/boards/index.html)

BCEM is an affiliate board of the American Association of Physician Specialists (AAPS), a national organization representing thousands of allopathic or osteopathic physicians in many specialties and types of practices throughout the US. AAPS has a primary objective to provide a clinically recognized mechanism for specialty certification of physicians with advanced training. Since 1984, AAPS has provided the headquarters for this board of certification effort, providing testing activities for twelve affiliated boards of certification. BCEM certification involves written and oral examinations delivered over a 3-day period. BCEM certification also requires paying the AAPS annual fee of \$425.

EM professional organizations, many state licensing boards, medical staff and credentialing agencies do not recognize BCEM certification as valid or legitimate. Unfortunately, unsuspecting public, federal and agency staff, and hospital medical staff and administrators sometimes do not know the difference between different claims of qualification that are made by physicians who wish to practice in EM despite their lack of training in an accredited EM residency. BCEM's value and legitimacy has been subject to harsh criticism in the EM community. Only a few years ago, communications circulated widely in EM newsletters, in which the individuals involved with BCEM traded accusations pertaining to the theft or misuse of the exam material.

BCEM does not require ACGME- or AOA-accredited EM residency training for eligibility to sit for the certification exam. It considers a "clinical practice track" adequate, as long as a physician submits 10 EM case reports, holds a current license and a valid ACLS, ATLS and PALS certification, and can provide proof of full-time EM employment for 5 years. This is defined as a minimum of 7,000 hours in 5 consecutive years.

Since January 2002, medical school graduates must be residency-trained. However, BCEM and AAPS accept training in a specialty approved by an AAPS specialty board of certification. Note that this is not necessarily formal EM residency training the way it is defined and accredited by the ACGME and AOA.

More recently, BCEM has begun requiring residency training, in addition to its original set of validations or in lieu of some its elements. Special consideration is given to physicians who 1) have either completed an ACGME or AOA-accredited Primary Care or Anesthesiology residency, or 2) are certified in a Primary Care specialty or Anesthesiology by an, ABMS, AOA or AAPS -recognized board of certification, or 3) have completed either a 12 or 24-month EM

graduate training program approved by the BCEM (not ACGME or AOA). Physicians completing a 12-month graduate training program must have practiced EM on a full-time basis for an additional 12 months, before or subsequent to completing the graduate training program.

#### **IV. Federation of State Medical Boards (FSMB)**

The FSMB is comprised of state medical boards of the United States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, and 13 state boards of osteopathic medicine. Its mission is continual improvement of the quality, safety, and integrity of healthcare through the development and promotion of high standards for physician licensure and practice. In cooperation with the National Board of Medical Examiners (NBME), FSMB administers the three-part United States Medical Licensing Exam (USMLE<sup>®</sup>) as a requirement for all licensed physicians. FSMB also operated the Federation Physician Data Center (FPDC), a national system for collecting, recording, and distributing to state medical boards and other appropriate agencies, data on disciplinary actions taken against licensees by the boards and other governmental authorities. Quality of care, sexual misconduct, and insurance fraud are examples of reportable violations. The FSMB collects and publishes data on physician licensing and disciplinary boards, including their licensing requirements and disciplinary functions. It maintains a resource library of the medical practice acts and regulations under which its member boards operate.

A few years ago, FSMB made a recommendation for three years of post-graduate residency training before full licensure. This recommendation would eliminate resident moonlighting for all residents, irrespective of their training. AAEM/RES published a position statement that supported the FSMB's recommendation on moonlighting, since allowing moonlighting basically devalues EM residency training. Note that AAEM and AAEM/RES, joined by SAEM and CORD, advocated the creation of an alternative dependent practice license that would allow residents to practice with adequate supervision and in their respective area of training (which would have translated into leaving the option of supervised moonlighting in EDs restricted to EM residents).

#### **V. Residency Review Committee (RRC)**

- Web site: [www.acgme.org](http://www.acgme.org)

The Accreditation Council for Graduate Medical Education (ACGME) is responsible for the accreditation of post-MD training programs within the United States and designates an RRC for each specialty. The RRC-EM establishes the program requirements as a guide to training competent EPs. It sets guidelines for the educational requirements, length of program, supervision, responsibility, faculty, educational hours, curriculum, evaluation, research, as well as many other aspects of EM training. The RRC conducts site visits to every residency

program at least every three years. The Website provides all the specifications required for ACGME accreditation for each specialty.

Listed below are a few of the many international organizations and their Websites. More information and links to additional international organizations can be obtained through the AAEM website.

## INTERNATIONAL

### I. Australasian College for Emergency Medicine (ACEM)

- Website: [www.acem.org.au](http://www.acem.org.au)

Established in 1984, the ACEM is an educational institution whose prime objective is the training and examination of specialist EPs for Australia and New Zealand, where EM was recognized as a specialty in 1993 and 1995 respectively. ACEM has a vital interest in the quality of emergency medical care provided to the community and, therefore, has a wide range of subsidiary objectives relating to ED accreditation, policies and standards for the emergency medical system, teaching and research, publication, and those aspects of the medico-political framework that have a direct impact on health outcomes for emergency patients. ACEM is a founding member of the International Federation for EM (IFEM). Its official journal is *Emergency Medicine*.

### II. Australasian Society for Emergency Medicine (ASEM)

- Web site: [www.asem.org.au](http://www.asem.org.au)

Established in 1981, ASEM represents all the medical practitioners interested in or who have an involvement in EM, and aims to promote a humanitarian approach to patients as well as fellowship and communication in the EM community. Membership is open to all registered medical practitioners in Australia. ASEM's journal is the same as ACEM's. ACEM emerged out of ASEM as a second Australasian organization.

### III. The Asian Society for Emergency Medicine (ASEM)

- Website: [www.asem.org.sg](http://www.asem.org.sg)
- ASEM was established in 1998 to promote EM, its research, training and education in Asia, to establish guidelines in Emergency Medical Care and to represent Asian EPs whenever necessary and appropriate. ASEM publishes the *Asian Journal of Emergency Medicine*. Since 1998, ASEM organizes almost yearly an outstanding Asian conference in EM.
- ASEM is unique in EM in allowing individual, organizational and corporate types of membership. Individual membership is open to physicians, nurses, and paramedical personnel. Organizations need to be national in scope, Asian, and dedicated to the field of EM. Each member organization nominates two representatives to ASEM. These rep-

representatives, and not individual members, are the only ones eligible to hold office and vote.

#### IV. The British Association for Accident & Emergency Medicine (BAEM)

- Website: [www.baem.org.uk](http://www.baem.org.uk)

BAEM was established in 1967, and initially known (until 1990) as the Casualty Surgical Association. Its objective is to ensure the highest possible standards of care to the acutely ill and injured in the ED. Membership is available to doctors whose professional commitment is to Accident and EM and whose interests it will seek to promote and protect. A separate association for trainees (The British Accident & Emergency Trainees Association) is closely associated with BAEM. BAEM organizes outstanding annual conferences and is a founding member of the IFEM. BAEM publishes the *Emergency Medicine Journal* (previously known as *Journal of Accident & EM*).

#### V. Canadian Association of Emergency Physicians (CAEP)

- Website: [www.caep.ca](http://www.caep.ca)

CAEP represents and provides advocacy for EPs and the emergency health care needs of the Canadian public. It has assisted in the development of national standards and clinical guidelines. CAEP communicates with the Canadian EP community to keep them informed of developments in the clinical practice of EM and in the political and societal changes which affect the delivery of emergency health care. CAEP also plays a vital role ensuring the availability of high quality educational resources in EM, which it achieves through its advisory role in the EM content of undergraduate and postgraduate education, its support and coordination of continuing medical education programs for EPs, its support and awards for EM research, and last but not least, its organization of the largest scientific meeting in Canada: the CAEP Annual Scientific Assembly. CAEP also publishes the *Canadian Journal of Emergency Medicine*. CAEP is a founding member of IFEM and represents EM through formal and informal linkages and exchange with various provincial, national and international organizations. CAEP supports its resident and student members through the activities of a resident section.

#### VI. European Society for Emergency Medicine (EuSEM)

- Web site: [www.diesis.com/eusem](http://www.diesis.com/eusem)

Founded in May 1994, EUSEM is a European forum for EPs. Its objective is to promote the advancement of EM in Europe by 1) fostering instruction, training and research, 2) disseminating information through meetings, courses, research and publications, 3) promoting the development of uniform information systems and data bank, and 4) encouraging the formation and cooperation between national and international EM associations. EuSEM publishes the *European Journal of Emergency Medicine*, and annually organizes outstanding scien-



tific congresses, alternating its biennial European Congress in a European country with the Mediterranean EM Congress (jointly run by EuSEM and AAEM) in a city around the Mediterranean basin. Last but not least, EuSEM published a landmark manifesto in 1998, which is a must-read for EPs with an interest in the international advancement of EM: Council of the European Society for Emergency Medicine (1998) *Manifesto* for emergency medicine in Europe. *Europ. J. Emerg. Med.*, **5**(1), 7-8; revised (1998): *Europ. J. Emerg. Med.*, **5**(4), 1-2.

#### V. International Federation for Emergency Medicine (IFEM)

- Website: [www.caep.ca/O10.ifem/O10-00.ifem.htm](http://www.caep.ca/O10.ifem/O10-00.ifem.htm)
- IFEM was established in 1991 by the ACEM (Australia), ACEP (USA), BAEM (Great Britain), and CAEP (Canada) to "promote at an international level, interchange, understanding, and cooperation among physicians practicing emergency medicine." Since 1998, membership is open to other national EM associations. IFEM organizes a major international conference, the International Congress on Emergency Medicine (ICEM), which is held every two years and hosted by a full member of the IFEM.
- Membership categories of IFEM include: a) Full: this is available to any national EM association in a country where EM is recognized as a specialty, with EM training programs. A full member can appoint one voting representative to the board. b) Affiliate: this is available to any national EM association in countries where the specialty of EM is not yet recognized. c) Founding Member: this applies to the four founding Member associations (ACEM, ACEP, BAEM, and CAEP).

### CONCLUSION

There are many more EM organizations around the world, with primary objectives which typically include the promotion and development of the specialty of EM, the advancement of emergency medical care, or the provision of EM education and training. However, the goals, composition, available resources and complexity run a wide range of possibilities. Many are national, regional or international organizations. Funding and logistics may be voluntary and member-driven, or dependent on governmental, official, academic or institutional support or will. Some have a pre-hospital focus, while others attend to all phases of emergency care, from the scene to the emergency department or even to the inpatient setting. Some allow membership to all providers involved or interested in EM, while others restrict membership to physicians or to societies. Some focus on a single aspect or area of EM such as disaster medicine, hyperbarics or international medical relief, while others are fully comprehensive in scope. The diversity and complexity is both daunting and inspiring. You

can find most of them by surfing through the "Links" section of the web site addresses we provided in this chapter. We hope that you found this chapter useful and invite you to visit all the web sites of these organizations. Become familiar with all organizational activity and structures in EM, and learn about the extent of diversity, opportunity, ongoing exchange and unity already established across the world.





# 34

## Women in Emergency Medicine

### RESIDENT AUTHOR:

Michelle Charfen, MD (Harvard Medical School / Harbor-UCLA Medical Center)

### FACULTY AUTHOR:

Sandra Schneider, MD, FACEP (University of Rochester, New York)

### FACULTY EDITOR:

Margaret O'Leary, MD, MBA, FAAEM (The MBA Programs, Benedictine University, Illinois)

"Emergency medicine has been great to me as a person, a wife, a mother and a *woman*". - Dr. Sandra Schneider

An endless list of advantages exists for emergency medicine (EM) as a career choice. This chapter will focus on the attributes of EM that make it a highly attractive field for women. Traditionally women are more likely to interrupt their careers for childbearing and childrearing than men are. However these traditional functions are more commonly shared *between* partners in today's world, particularly in dual-career families. The demands of family life create the need for flexibility for both men and women.

EM offers a degree of flexibility in scheduling that is virtually non-existent in other fields of medicine. EM consists of shift work, the scheduling of which allows some control over one's schedule. An emergency physician (EP) has a set number of shifts to work per month. These shifts can be arranged to correlate with other interests and responsibilities. One example is an individual who arranged his schedule so that he had eight days "on" and then eight days "off." This allowed him to spend every other week in another city where his wife had been temporarily transferred. Another example is an individual who is involved in laboratory research and who arranged to practice EM during evening and weekend hours. This permitted her to pursue an active research career with excellent pay. This amount of flexibility is possible in few, if any, other specialties.

The ease of relocation is another highly desirable advantage offered by EM. Two-career families often struggle with the geographic demands of each partner's career. Flexibility of one partner may ease that tension. EM physicians are trained to care for any patient that walks through the door; therefore, they can do this at nearly every location in the world. Relocation can be possible without the stress and work involved in reestablishing a practice.

Another exciting advantage offered by EM is the "youth" of the specialty. The first resident began training in EM in 1970 at the University of Cincinnati

Medical Center.<sup>1</sup> Today there are nearly 125 allopathic and over 30 osteopathic accredited EM residency programs.<sup>2</sup> EM continues to grow and expand. Within EM there are many opportunities for female EPs to become involved in the development of the field and help to shape its future. Many of the other medical disciplines were already grounded in their traditions and methods of training before women entered the disciplines in significant numbers. In comparison, the development of EM has only just begun.

Given the variety and significance of the advantages for women in EM, it is surprising to note that females are underrepresented in the field in relation to their numbers in medicine in general. For example, the percentage of female medical school graduates continues to rise, going from 23% in 1979 to more than 41% in 1997. However, only 20% of the EM workforce and 27% of all EM residents are women.<sup>3</sup>

The American College of Emergency Physicians (ACEP) Graduate Medical Education (GME) Committee, which was established in 1993 to address issues related to GME and EM residency training, recognized the need to increase the number of women in the EM applicant pool in order to be more representative of the American population.<sup>4</sup> Such proportionate representation is important to deliver optimal care to patients who rely on emergency departments (EDs) across the country. This population includes a large number of impoverished patients, of which a disproportionate percentage is made up of women and children.

In 1996, the ACEP committee reported that a 1.5-fold greater percentage of women were graduating from medical schools than were enrolled in EM residency programs. The under-representation of women in EM residency positions was a consequence of fact that the proportion of women applying for EM residencies (26.8%) was lower than that for all other medical specialties (39%). The committee made suggestions for outreach to women and minorities at the national, state, and local levels, including programs in leadership development, mentoring, and the recruitment and retention of women and underrepresented minorities.<sup>4</sup>

Recent data from 2000 shows that the percentage of female applicants to EM residency programs remained unchanged since 1996 at 27%.<sup>5</sup> In order to increase the percentage of women in EM, the current dynamics that perpetuate this under-representation should be investigated.

Self-selection is one reason that helps to explain why fewer women apply to EM residency programs than to all other medical specialties. One can argue that EM calls for stereotypically "male" characteristics. Dr. Pamela L. Dyne discusses this issue: "The ideal EP has a strong personality and a quick decisive manner. Men with these characteristics are admired and described positively

as 'in charge', 'assertive' and admired while women with these same characteristics are traditionally described as too 'aggressive', 'pushy' and other derogatory terms."<sup>6</sup> Stereotypic male behaviors are not positively reinforced in women throughout their lives; therefore, some women are less comfortable than their male colleagues are in positions that call for these behaviors.

Mentoring can address some women's discomfort level with stereotypic male behavior. Mentoring is critical at every stage of medical training. Young women interested in EM need successful female role models. A study of medical students found that a higher proportion of men than women reported having a mentor.<sup>7</sup> One study reported that women protégés are more likely than men to report negative experiences with mentoring.<sup>8</sup> Another large study on mentorship found that women and men differed in their views of the drawbacks of mentoring. Women anticipated greater risks in becoming a mentor and reported less time to be a mentor, reflecting greater job demands and/or family responsibilities.<sup>9</sup> These studies show us that it is not only necessary to find mentors for women, but also that we must work to address concerns within these relationships so that they are beneficial for both the protégé and mentor. There are many resources available that address these issues and offer suggestions, including a section on "Enhancing the Environment for Women in Academic Medicine" on the American Association of Medical Colleges (AAMC) web page.<sup>10</sup>

The struggle to represent minority populations in organizations is pervasive in all realms of society. This same struggle for proportional representation holds true for women physicians in EM. "Until centers can increase the number of women in senior positions, the centers cannot facilitate changes that improve the environment for women and the ability for the institution to obtain and recruit women and to promote women to senior ranks."<sup>11-13</sup> The population that EM serves would benefit from a more representative work force. In a recent editorial, "The Women Physician in the Year 2000", Dr. G.H. Bruntland, Doctor General of the World Health Organization, discusses this issue, saying "We need to bring women into decision-making. As long as women have little or only token representation on policy-making committees and boards, a key perspective will be missing, compromising medicine's fulfillment of its social contract as well as its excellence." She speaks of her experiences early in her career saying "As a member of a board that screened applications for abortion, I saw this time and again how a woman's perspective and needs were neglected in a process run mainly by men."<sup>14</sup> It is crucial that women physicians are involved in policy-making regarding workplace expectations. Dr. Dyne discusses her personal experience with maternity leave: "I have found that women have been extremely helpful in extending deadlines and being flexible while I am on

maternity leave to encourage me to really take the time I need right now with my family while also helping me to remain part of certain projects. I do not think men think about these things.”<sup>6</sup> It is imperative that women are involved in policy-making to address their unique needs and perspectives.

This lack of proportional representation in leadership position is obvious in administrative positions in the EM community. One report found that in 1995 only 6.5% of 400 ED directors in California were women, while 13.6% of EPS were female, and worked 11.4% of the physician hours provided in these 400 EDs. The authors also found 13.8% of the California EDs had no women on staff.<sup>15</sup>

While the number of women at all levels of academic medicine in all specialties is increasing, significant disparities persist in the advancement of women and men on medical school faculties. When controlling for the actual proportional representation of men and women in academic medicine, the number of women who advanced from both assistant to associate professor and from associate professor to full professor was significantly lower than expected.<sup>16</sup>

In one study of the achievement of women in academic EM relative to men, women in academic EM were found to be less likely to hold major leadership positions, spend a greater percentage of their time in clinical and teaching activities, and were less likely to achieve senior academic rank. This pattern is similar to those reported in other specialties. The study also found that female faculty members were less productive in terms of peer-reviewed articles.<sup>13</sup>

Can a simple lack of productivity explain the fact that women are promoted at slower rates than men? The women in the study reported more clinical and teaching responsibilities and less administrative time. It is possible that this combination provides less flexible time to devote to scholarly activity and less opportunity for networking with faculty at higher ranks. Women are more likely to be assigned to the clinical/teacher or clinical educator track, which traditionally has led to lower traditional academic productivity. In the previous study, women were given fewer resources making academic success harder. That factor may be true in EM as well. It is possible that women have more difficulty finding the initial time to pursue academic and leadership endeavors that may then later allow them more “protected” time.<sup>7</sup>

If one considers the possibility that lack of time may be contributing to decreased productivity, the question becomes “Why should women be more affected by this than their male colleagues?” The important issue of familial responsibility is a large part of the answer. Women are much more likely to interrupt their careers for childbearing and rearing than men. “One of the reasons for [lack of women in key positions] is that the structure of medicine is based on a male model of productivity,” said Dr. Sharyn Lenhart, 1998 presi-

dent of the American Medical Women's Association (AMWA). "The path to success is straight up the ladder, and it does not allow for stops along the way for things like maternity leave and time for a family." A restructuring of this model might not only benefit women, but could conceivably contribute to enlarging upon and enriching the experience of male doctors, perhaps even reducing the dismal divorce rate in the medical profession".<sup>17</sup>

There are many ways in which the system can be remodeled. Time periods can be extended between entry into faculty positions and when decisions regarding promotion and tenure are considered. Physicians that complete projects over an extended period of time can be evaluated at a later date, rather than denied promotion when evaluated by current time standards. Many schools do stop the promotion "clock" adding on an additional year to traditional timelines for each pregnancy. Whether one year is sufficient is questionable. In many institutions "part-time" employment is possible without penalty at promotion time. Data from a 1996 survey showed that of the 95 schools with tenure systems, 25 allowed part-time faculty to earn tenure.<sup>18</sup>

Cydulka and colleagues offer the following recommendations for increasing the advancement of women within academic EM:

- Educate women entering the academic system on the guidelines for academic promotion and help them to understand that teaching and clinical activity are not rewarded with academic promotion.
- Encourage women to pursue their goals in ways that lead to academic promotion.
- Establish mentoring and research relationships to help guide women toward successful realization of their goals.
- Make efforts to include women on projects and committees that will help the advancement of their careers.
- Encourage women to maintain mentoring relationships throughout their careers, and especially during childbearing years.<sup>13</sup>

## CONCLUSION

Despite concerns about promotion, academic EM remains an outstanding career for women. Although women advance more slowly in academic EM, their advancement is slow in all fields of academic medicine. EM offers the advantage of its relative youth as a specialty. EM is continuously undergoing change as it grows and matures to meet the demands it faces. This certainly creates opportunity. The field must continue to address the issue of a disproportionately low percentage of women EPs by restructuring the dynamics that are sustaining this under-representation of women.

## References:

- 1) <http://www.emermed.uc.edu/organization.asp?sec=3>
- 2) <http://saem.org/rescat/contents.htm>
- 3) AAMC data book. Washington, D.C.: Association of American Medical Colleges, 1999.
- 4) Martin ML. Applicant pool for emergency medicine residency programs: Information on minority and female applicants. *Ann Emerg Med.* 1996;27:331-338.
- 5) Hoffmann GL, Bock BF, Gallagher EG, et al. Report of the Task Force on Residency Training Information (1999-2000), American Board of Emergency Medicine. *Ann Emerg Med.* 2000;35:481-498.
- 6) Phone Interview with Pamela L. Dyne, MD, Director, UCLA/Olive View-UCLA Emergency Medicine Residency and Co-Director, UCLA/Olive View-Sepulveda Combined Emergency Medicine and Internal Medicine Residency, Assistant Professor of Medicine, UCLA School of Medicine. April 2001.
- 7) Haapanen K, Ellsbury K, Schaad D. Gender differences in the perceptions of mentoring among first- and second-Year medical students. *Acad Med.* 1996;71:794.
- 8) Fried L, Francomano CA, MacDonald SM, et al. Career development for women in academic medicine: Multiple interventions in one department of medicine. *JAMA.* 1996;176:898-905.
- 9) Ragins B, Cotton J. Gender and willingness to mentor in organizations. *J Management.* 1993;19:97-111.
- 10) <http://www.aamc.org/about/progemph/wommed/wimguide/start.htm>
- 11) Carr P, Friedman RH. Gender diversity-struggle in the glass house. *Mayo Clin Proc.* 1999;74:201-203.
- 12) Heid IM, O'Fallon JR, Schwenk NM, Gabriel, SE. Increasing the proportion of women in academic medicine: One institution's response. *Mayo Clin Proc.* 1999;74:113-119.
- 13) Cydulka, RK, D'Onofrio G, Schneider S, et al. Women in academic emergency medicine. *Acad Emerg Med.* 2000;7:999-1007.
- 14) Bruntland, GH. The woman physician in the year 2000. *J Amer Med Women's Assoc.* 2000;55. ([http://jamwa.amwa-doc.org/vol55/55\\_1\\_ed.htm#bio](http://jamwa.amwa-doc.org/vol55/55_1_ed.htm#bio))
- 15) Kazzi A, Langdorf M, Tabar P. Gender profile of emergency physician practice in California. *Ann Emerg Med.* 2000;36:5-9. Bruntland, GH: The Women Physician in the Year 2000. *JAMWA* Mar 2001.
- 16) Nonnemaker L. Women physicians in academic medicine. *NEJM.* 2000;342:399-405.
- 17) Katz, L. Career Links. From the Publishers of the New England Journal of Medicine. Career Update for Physicians, Women Physicians: Opportunity and Obstacles. <http://www.nejm.org/careerlinks/CareerE.asp>
- 18) Socolar R, Kelman LS, Lannon CM, Lohr JA. Institutional policies of US medical schools regarding tenure, promotion and benefits for part-time faculty. *Acad Med.* 2000;75:846-9.

## 35

Minorities in  
Emergency Medicine

## RESIDENT AUTHOR:

Earl L. Miller, MD (Henry Ford Hospital, Detroit)

## FACULTY AUTHOR:

Joanne Williams, MD, FAAEM (Martin Luther King, Jr. / Charles R. Drew Medical Center, Los Angeles)

## FACULTY EDITOR:

Margaret O'Leary, MD, MBA, FAAEM (The MBA Programs, Benedictine University, Illinois)

## INTRODUCTION

Over the last 3 decades, Emergency Medicine (EM) has become a highly respected medical specialty in the United States and is rapidly growing as a specialty in culturally diverse habitats around the world. Due to the continuing shortage in qualified emergency physicians (EPs), EM residency programs rapidly increased in number.

Unfortunately, minorities remained underrepresented in the EM workforce. Data from the American Board of Emergency Medicine (ABEM) reveal that, in 2000-2001, 5% of EM residents were African Americans and 3% were of Hispanic descent.<sup>1</sup> Hispanic EM residents were equally divided between Puerto Rican, Mexican American and "others". Native Hawaiians comprised <1% as did American Indian or Alaskan Natives. Next to Caucasians (74%), Asians were most represented (10%).

According to the U.S. Census Bureau Report for the year 2000, African Americans and Hispanics represent 12.9% and 12.5% of the entire population, respectively.<sup>2</sup> American Indian and Alaska Natives comprised 1.5% and Native Hawaiian and Other Pacific Islanders, 0.3%.

According to the American Medical Association (AMA), African American, Hispanic, Native American and Alaskan American physicians COMBINED, make up only 7% of the total number of physicians practicing in America.<sup>3</sup> Considering the percentages we reported above, these minorities represent 8-9% of all EM residents, indicating that EM is perhaps a little more representative of the general population. This certainly confirms that the under-representation of minorities in medicine is the root of under-representation in EM, and not an EM-specific bias against minorities. This perhaps also suggests that EM is perhaps a little more attractive to minorities than the other specialties.

Because of the increasing diversity of the U.S. "melting pot", a growing number of EM residency programs recognize the need for minority EPs. EM resi-



dency programs seek to attract the brightest and most competitive medical students. However, many programs look for other qualities necessary for the well-trained and well-rounded EP such as understanding and respecting cultural differences in colleagues and patients, and treating all individuals with respect and dignity. EM applicants should not only concentrate on grades and research, but also develop the necessary skills to deal with the cultural diversity he or she will no doubt encounter practicing in emergency departments (EDs) across the nation.

This chapter addresses how a minority applicant should optimally approach EM as a career. We hope it will serve as a useful tool to guide such an applicant through the process of organizing his or her thoughts in achieving the goal of training and practicing in EM.

### IDENTIFYING A MENTOR

Selecting a mentor is one of the most important decisions a minority medical student should make before embarking on the process of applying to an EM residency program. The mentor should be sensitive to and an advocate for cultural diversity in EM. The mentor should be active in EM as a clinician, researcher or academician. The mentor should be able to offer useful information with respect to the different subspecialties of EM as well as academic, research, available fellowships and/or clinical opportunities in EM.

There is no official ranking of EM residency programs. Many programs have developed reputations based on accomplishments of graduates or faculty members. On the other hand, programs may have been unfairly "branded" as undesirable. The ideal mentor should be unbiased. He or she should remain objective while assisting applicants in evaluating different training programs and while guiding them through the difficult process of selecting their rank list.

Once you have identified a potential mentor, schedule a meeting to ascertain the mutuality of the mentorship and share your goals and aspirations with respect to EM. Once you establish such mentorship, how should you approach the application process?

### SELECTING THE PROGRAMS WHERE YOU SHOULD APPLY

After initially experiencing a very rapid growth, EM programs continued to increase in numbers. However, this trend recently reached a plateau both in the number of new programs and the number of residents per program. These programs may be based in a university, community or public hospital. All of these programs foster an academic environment.

As a minority applicant, you must decide which setting will be a comfortable training environment for you. Certain programs embrace cultural diversity. Many are based in the inner city or county hospitals that typically have a large num-

ber of minority patients. While seeking a training program that would be sensitive to your needs as a minority applicant, it is essential to focus on the aspects of training that are most important to you and to your vision of the type of career and the practice location that you envision for yourself.

Early on, define your career goals. Would you prefer caring for patients in a community or a teaching hospital? Do you envision yourself practicing in underserved or urban areas? Will you seek heavy involvement in research or academic medicine?

Positive and negative aspects of each program considered should be researched prior to choosing a potential program. An understanding of all the arenas in the practice of EM should aid you in choosing a program. Once you have narrowed the selection of potential programs, you should gather research on each program. Your mentor or advisor can assist in the acquisition of information. You should also consult with other medical students to share ideas and information. Base your assessment of each program on fact and not rumors. Consult with EPs practicing in the arena in which you are interested. Your choices in programs should satisfy your academic, clinical and cultural aspirations. It is advisable for you to engage in research and schedule clerkships with your top choices of potential programs. A clerkship provides the best opportunity for the program to assess your attributes and to consider whether you are potentially desirable to them as a resident.

When you submit your application material to the Electronic Residency Application Service (ERAS), include in your CV and personal statement any service to underserved communities and minority groups. When applicable, list your membership and positions that you may have held in related organizations. Then refer to the service that you provided in your personal statement. If these matters are a principal objective of your life, do not hesitate to speak about the role of social and political activism in minority-related issues. Optimally, balance this by displaying similar motivation or listing activities and roles aimed towards issues other than minority-related ones. Those include efforts to secure the best EM training such as scholarly projects, and service to the general population and to EM, medical, or other organizations, advancing issues that are important to all patients and physicians, irrespective of their ethnicity.

EM has consistently maintained one of the highest fill rates in the National Resident Matching Program (NRMP). In 1999, 98.68% of PPG-2 positions and 96.71% of PPG-1 positions were filled through the NRMP. In 2000, the percentages were 97.96% and 99.49%, respectively. The 2001 match percentages were the same, as in 2000.<sup>4</sup> Hundreds of applicants across the USA do not find a position in an EM training program. Literally, a handful of residency positions across the USA are not filled through the electronic process of the NRMP.

Apply to a larger number of programs than the total of the ones that you would have researched in detail. You must be flexible, and recognize that you are engaged in one of the most competitive selection processes in medicine, in a specialty where the number of applicants far exceeds the number of available residency entry positions.

### ANSWERING CONCERNS AND QUESTIONS RELATED TO MINORITY ISSUES

Visit the Website of the programs that interest you. Most programs display the names, profiles and, in some instances, pictures of their faculty, residents and graduates. This can be a very effective and discrete way to identify the presence of minority residents, faculty and alumni in that program.

For additional guidance, consider contacting organizations that offer a venue to address minority issues. The American Academy of Emergency Medicine (AAEM) has recently established a Minority Affairs Task Force, a source of information and suggestions. Feel free to contact its chair through [info@aaem.org](mailto:info@aaem.org). Consider contacting the EM Section of the National Medical Association (NMA), which is dedicated to recruiting and mentoring minority medical students. The NMA can be reached at its Executive Offices at [breinhardt@NMAnet.org](mailto:breinhardt@NMAnet.org). One other resource is the Xi Medical Fraternity, which was established in 1995 as an association of medical students to promote the ideals, ideas and identities of African American doctors in training.

### INTERVIEWING

By this time, you should have researched the programs, discussed issues with your mentor, and prepared yourself as an applicant with clerkships, research, or other scholarly projects.

One of the most important pieces of advice is to relax during the interview! Be confident and self-assured. During the interview process, most programs are trying to find out more about you. They know you "on paper", i.e., test scores, Dean's letter, etc. This is the time when you need to describe the importance of EM to you and voice your goals and aspirations. Through the interview, you are convincing the interviewer that you will be an asset to his or her program and that, in return, his or her program can fulfill your goals and aspirations. Confidence and clear answers are crucial when you express yourself. Be knowledgeable and proud of whom you are.

How can you know if a residency program can or will meet your expectations with respect to you as a minority applicant? The minority student should observe and discretely inquire to establish whether a program has other minorities as residents, faculty or alumni. Look for cultural diversity in the patient population, ancillary services and other departments in the institution and hospital. Realize that you are interviewing in one department of an entire medical

facility.

The interviewer is not supposed to ask about your political, social or personal views with respect to "racial" issues. Such questions are considered inappropriate. However, these topics are no longer inappropriate for an interview setting if you - the applicant - broach the topic and ask any of them. There are several tactful ways to ask, and direct questions, worded carefully, are generally perceived as appropriate and sometimes insightful. Such questions that can help address your own questions and concerns as a minority applicant include:

- 1) What is the percentage of underserved patients seen in your ED?
- 2) Are there special programs to address the special needs of your underserved patients, e.g., patient teaching, in your department or hospital?
- 3) Is there an atmosphere of cultural sensitivity within your department?
- 4) Do you have cultural diversity training for your interns and residents?

Some may suggest asking direct questions such as:

- 1) What percentage of your faculty are minorities?
- 2) What has been the percentage of minority graduates from your program over the last several years?
- 3) If the percentage seems uncomfortably low - you may inquire as to whether there are support groups to assure the acclimation of minority interns and residents with respect to coping with the new environment of which he or she has become an integral component?

Such questions are direct and would typically provide you the answer you seek. However, this can also leave the interviewer "insecure", with an impression that you perceive their program to be deficient in that regard and tint the rest of the interview. After all, many programs do not have minority applicants and faculty since they already are underrepresented in EM. Accordingly, consider other discrete alternatives to get the answer to such questions such as reviewing the roster of graduates, faculty and alumni. As previously stated, these are often found on the Website, or provided by the program, sometimes upon request. If you run into a minority faculty or resident during the interview, get their number or email and contact them later to ask direct questions.

Last but not least, feel confident initiating a discussion that can enable you to present to the interviewer any activism you may have been involved in to advance minority issues. Present the context and the service you did with a positive tone, as one of community service and as an illustration of your team play, dedication and leadership skills. Emphasize the positive (service, commitment, and cultural sensitivity) and avoid criticism. Certainly include such accomplishments in your initial application and CV and feel confident referring to

it in your personal statement.

Last but not least, take time during the interview to provide the interviewer with an impression that you are well-balanced and adequately informed regarding other issues and not just about minority matters. Discuss activities, service and challenges that are core to the general population, in regard to education, research, training, well being and life outside of residency.

### ACTIVISM VERSUS MILITANCY

It is essential for an applicant **not** to portray his or herself as a "militant" when it comes to minority affairs. Too much emphasis on minority representation, sad as it sounds, may hurt the odds of being considered for certain programs. One should be observant and take clues from the interviewer as to when the conversation may be perceived as having "militant" overtones. Take note of "body language", e.g., the interviewer becomes restless, makes less eye contact, seems hurried, etc.

During the interview process, you should get a feel for the program and decide if the program rises to your goals and aspirations. You have only a few hours to decide if you could spend the next three or four years at this program.

How to reach and maintain the fine balance between activism and militancy in a search for minority representation? Do not criticize the program, a community, or the specialty. Do not emphasize this as a critical issue for you in selecting a program. Instead talk about the importance of diversity and cultural sensitivity, about the difficulties and lower quality of care available to underserved populations and to minorities. Talk about service, volunteerism, cultural sensitivity, team play and leadership. Emphasize the positive, not the negative. Present yourself as an informed applicant who is motivated to participate, as a team player, in finding the solution to challenges and in providing care and attention to help minorities and the underserved.

### CONCLUSION

An integral part of emergency care is an understanding of cultural habitat. There is an American Indian saying that goes something like "You cannot judge a man until you have walked a mile in his moccasins." Understanding the uniqueness of any culture enables the EP to comprehend the "why" of certain diseases that are common in particular populations. The minority student, resident, faculty and community EP in any EP group or training program are all essential components necessary to optimally provide effective emergency care and education in our very culturally diverse society. We hope that this chapter will be a helpful tool in the process of initiating a career in EM. We wish you well.

## References:

- 1) Report of the Task Force on Residency Training Information (2000-2001), American Board of Emergency Medicine. *Ann Emerg Med.* 2001;37:515-32.
- 2) U.S. Census Bureau. Census 2000. Summary File 1. <http://www.census.gov>
- 3) <http://www.unity.ama-asn.org/MAC>
- 4) <http://www.nrmp.org/res.match/table6.htm>



## 36

## Military Track Medical Students in Emergency Medicine

### RESIDENT AUTHOR:

Dan S. Mosely, MD (San Antonio Uniformed Services Health Education Consortium)

### FACULTY AUTHOR:

Robert G. Buckley, MD, MPH, FACEP (Naval Medical Center, San Diego)

### FACULTY EDITOR:

Carol L. Barsky, MD, FAAEM (Mount-Sinai Medical Center, New York)

## OVERVIEW

Medical students seeking financial assistance for medical school costs who are interested in military service have two options. First, there is the Uniformed Services University of the Health Sciences (USUHS), a fully accredited medical school in Bethesda, Maryland. Second, there is the Health Professional Scholarship Program (HPSP) that funds most of the cost of medical school in exchange for a service obligation to the military following medical school and completion of internship or residency.

### UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

Established in 1972, the USUHS (a.k.a. F. Edward Hebert School of Medicine) trains future physicians in the unique aspects of military medicine while meeting all requirements for general medical licensure in the United States. Application to USUHS is through the American Medical College Application Service (AMCAS), as it is to all other accredited US medical schools. One must also meet all requirements for active military service. The potential student must undergo a complete medical screening and background security investigation prior to being unconditionally accepted into USUHS. Detailed information is available at [www.usuhs.mil](http://www.usuhs.mil).

The four services represented at USUHS are the Army, Navy, Air Force, and Public Health Service (PHS). While attending USUHS, students receive an active reserve commission, with a full active duty commission upon graduation. Students are ranked Second Lieutenant (Army and Air Force) or Ensign (Navy and PHS) and receive basic military pay for that rank. All tuition payments, fees, medical supplies and books are provided.

In addition to meeting all the requirements for medical education, the USUHS student is exposed to both 'life in the military' and 'military medicine.' Classes are given in military medical history, chemical and biological warfare, wound ballistics, deployment medicine, as well as many other military topics.



At least two field exercises are conducted over the 4-year curriculum, giving the student a concentrated and intense introduction to medical support during simulated combat operations.

Following graduation, the term of commitment is longer than that incurred with an HPSP scholarship. After post-graduate training, the USUHS graduate owes seven years of active military service. Any commitment previously incurred to either Reserve Officer Training Corps (ROTC) or any of the military academies is additional.

USUHS prepares students for a rewarding life in the military and is best suited for those who enjoy the unique aspects of military medicine.

### HEALTH PROFESSIONAL'S SCHOLARSHIP PROGRAM

The Health Professional's Scholarship Program (HPSP) is designed to provide the military with competent physicians to meet both peacetime and war-time medical roles. Recipients of the HPSP scholarship receive full payment for medical school tuition, fees, medical supplies, and textbooks, as well as a monthly stipend, in return for a military service commitment following graduation. To apply for the HPSP, the student must already be accepted into an accredited medical school (or be enrolled). Additionally, the student must meet all requirements for active military service such as a medical screening and background security investigation. More information on the HPSP program can be found at the following web sites:

- Army - <http://www.meds.army.mil/medicaleducation/>
- Navy - <http://nshs.med.navy.mil/hpsp/default.htm>
- Air Force - <http://ci.afit.af.mil/CIM/CIMJ/cimj.asp>

Following graduation, the physician owes one year of active military service for every year of scholarship, with a minimum of 2 years service. For instance, if the entire four years of medical school were funded by the military, the student would owe four years of service. However, if the student applied after the first year and only three years were funded, the student would only owe three years. A student receiving the scholarship for only one year of medical school would still owe the minimum 2 years of service.

### OFFICER PREPAREDNESS TRAINING

All medical officers attend 4 to 6 weeks of basic officer training. For USUHS students, this occurs prior to the first year of medical school. For HPSP students, this is accomplished either during summer term in medical school or immediately upon graduation. These courses are designed to give the new medical officer an orientation to military life as well as military customs and courtesies.

Currently, the Army conducts its "Officer Basic Course" (OBC) at Fort Sam

Houston, Texas. The Navy's "Officer Indoctrination School" (OIS) is located in Newport, Rhode Island, while the Air Force conducts the "Commissioned Officer Training" (COT) course at Gunter Annex, Maxwell Air Force Base, Alabama.

### POST GRADUATE EDUCATION IN THE MILITARY

The three typical pathways to residency training in the military are inservice programs at military treatment facilities (MTFs), or deferment and outservice programs that are completed at civilian residency training programs. For any given specialty, a graduate medical selection board is convened in the capital region each December to determine the program selection and the number of years of training for every applicant. Selection board results are published in mid-December.

### INSERVICE RESIDENCY TRAINING PROGRAMS AT MILITARY TREATMENT FACILITIES

Various Army, Navy, and Air Force MTFs around the country sponsor inservice residency training programs. They are all fully accredited by the Accreditation Council for Graduate Medical Education (ACGME). Nearly all specialties and subspecialties are represented as well as numerous fellowships. While in a dedicated post-graduate training program (internship, residency, or fellowship), pay-back towards the initial service obligation is on "hold." The service commitment resumes upon graduation from training. Inservice training counts toward retirement, but generally incurs additional obligated service time which may be served concurrent with other medical school obligations.

Currently, inservice residency training EM programs are available at the following MTFs:

#### Army:

- Madigan Army Medical Center, Fort Lewis, WA - Post-Graduate Years (PGY) 2-4
- Darnall Army Community Hospital, Fort Hood, TX - PGY 1-3

#### Navy:

- Naval Medical Center San Diego, San Diego, CA - PGY 2-4
- Naval Medical Center Portsmouth, Portsmouth, VA - PGY 2-4

#### Air Force:

- Wright-Patterson Medical Center, Wright-Patterson Air Force Base, OH - PGY 2-4

#### Combined Programs (Army-Air Force):

- Brooke Army Medical Center, Fort Sam Houston, TX & Wilford Hall Medical Center, Lackland Air Force Base, TX - PGY1-3

## DEFERMENT PROGRAMS FOR RESIDENCY TRAINING AT CIVILIAN PROGRAMS

Some graduating medical students are selected for deferment for their entire residency. This means that the student can match as an intern/resident and complete his/her training in a civilian program. Upon such completion, he/she then enters or returns to military service as a civilian residency-trained emergency physician (EP). In some cases, similar deferment of service obligation is permitted for graduating medical students or medical corps officers who are already in the process of completing or have completed an internship.

Other graduating students are, however, granted only a one-year deferment to complete an internship in a civilian program. They are then expected to serve in general medical practice as general medical officers, as flight surgeons, or as diving medical officers for 2-3 years before applying for further inservice, outservice or deferred training.

Application to this program follows the normal civilian "match" guidelines after approval from the ACGME of the respective service. Using the deferment route to post-graduate training incurs no further obligation but neither does it count toward payback for the initial obligation. Furthermore, the years spent in deferred training generally do not count toward retirement. USUHS students are not eligible for deferment training programs.

## OUTSERVICE PROGRAMS FOR RESIDENCY TRAINING AT CIVILIAN PROGRAMS

Outservice training allows medical corps officers already on active duty the opportunity to train at a civilian institution while remaining on full-time active duty status. Unlike members in a deferment program, outservice trainees continue to draw their military pay based on rank and may be eligible for certain bonuses. In addition, like inservice training, time served in outservice training counts toward retirement.

The number of outservice training slots awarded each year varies depending on the particular need for residency or fellowship trained specialists for the respective branch of service. Graduating medical students are generally not eligible for outservice training.

## SUMMARY

The military offers a unique and exciting perspective to the practice of emergency medicine (EM). As recognized leaders in resuscitation, stabilization and triage, EPs are uniquely qualified to provide the medical support needed for either wartime or peacetime missions. Furthermore, EPs play a leading role in training tomorrow's medics and corpsmen.

For more information on Military Medical Student forums and activities, please visit the Military Medical Student home page at <http://www.usuhs.mil/mmsa/>.

# 37

## Osteopaths and Emergency Medicine

### RESIDENT AUTHOR:

Michael A. LoGuidice, DO (AAEM/RES Vice President / Memorial Hospital, York, Pennsylvania)

### FACULTY AUTHOR:

David A. Wald, DO, FAAEM, FACOEP (Temple University, Philadelphia)

### FACULTY EDITORS:

Carol L. Barsky, MD, FAAEM (Mount-Sinai Medical Center, New York)

Osteopathic (DO) medical students undergo identical medical training as their allopathic counterparts (MD) with the exception of additional training in musculoskeletal medicine and manipulation. Graduates of osteopathic medical schools are referred to as "DOs." Allopathic graduates are known as "MDs." In the United States (USA), DOs are licensed to train in and therefore eligible to practice all specialties of medicine and surgery. Osteopathic medical students that plan on a career in emergency medicine (EM) have the opportunity to train in either osteopathic or allopathic EM residency programs. A significant number of osteopathic medical students chose to apply to the allopathic EM programs that are accredited by the Accreditation Council for Graduate Medical Education (ACGME). In 2002, 79 (7.4%) out of the 1073 PGY-I entry positions in allopathic EM programs went to osteopathic medical school graduates.<sup>1</sup> Upon residency completion, these DOs are eligible to sit for the certification exam administered by the American Board of Emergency Medicine (ABEM).

The majority of osteopathic medical students (over 150 per year) train at institutions that support an osteopathic EM residency (OEMR). All OEMRs are approved by the American Osteopathic Association (AOA) through the Executive Committee of the Council on Postdoctoral Training. All programs undergo periodic inspection (every 3 years) by an EM specialist designated by the AOA to insure that the programs adhere to the standards of residency training. The OEMR prepares the future resident to practice EM and to sit for the board certifying examination administered by the American Osteopathic Board of Emergency Medicine (AOBEM).

The first certification exam by AOBEM was administered in 1980. Presently, there are 1,132 osteopathic physicians that are certified through the AOBEM. As compared to the American Board of Emergency Medicine (ABEM) certification examination, AOBEM has a similar written (part 1) and oral board (part 2) format. In addition, for board certification, AOBEM requires applicants to submit 25 clinical cases for review (part III). All of the EM specialty

societies (e.g. AAEM, ACEP and ACOEP) consider board certification by AOBEM equivalent to board certification by ABEM. AOBEM also offers examinations for certification of added qualification (similar to subspecialty boards) in sports medicine, emergency medical services, and toxicology. Specific requirements for eligibility may be obtained from AOBEM.

With a membership of almost 2,000 physicians, the American College of Osteopathic Emergency Physicians (ACOEP) is an organization that provides both a professional and an educational role to support osteopathic residents, students and graduates and to promote their philosophy in EM. The ACOEP maintains liaisons with various EM organizations including the American Academy of Emergency Medicine (AAEM), the American College of Emergency Physicians (ACEP), the National Association of EMS Physicians, the National Association of EMTs, and the National Association of Emergency Medicine Educators. In addition, ACOEP supports active resident and student chapters. Many osteopathic emergency physicians (EPs) are also members of other specialty societies including AAEM, ACEP and SAEM. According to a study of the workforce in EM, osteopathic EPs make up approximately 12% of the EM workforce.<sup>2</sup> In regard to teaching status and practice location, the limited data identified that 3% of EPs at academic medical centers were DOs, and that 16% of EPs practicing in rural locations were DOs. According to the American Osteopathic Association, there are 2,729 DOs practicing EM full-time, including attending physicians, residents, and interns, and another 820 part-time practitioners. During the 2001/2002 academic year, there were approximately 480 osteopathic EM residents and interns in training.

Traditionally, osteopathic medical students complete an AOA-approved rotating internship (PGY-1) prior to entering residency training. Some institutions have modified this traditional curriculum to provide a specialty track internship in EM or have incorporated the internship year into the residency program. A traditional rotating internship includes rotations in internal medicine, general surgery, OB/GYN, pediatrics, family medicine, and ICU. The "EM track internship" provides for additional EM training during the intern year. The first OEMR program was established in 1979. In 1989, the length of residency training was extended to a total of 4 years (internship plus 3 years of EM residency training). OEMRs usually adhere to a three-year curriculum (PGY-2 to PGY-4). Some osteopathic institutions also sponsor combined training in EM/Family Medicine, EM/Internal Medicine, or EM/Pediatrics. These programs require a total of 5 years of postgraduate training (internship plus 4 years of combined residency training). Upon successful completion of these training programs, the graduate will be dual board-prepared. Further information regarding combined osteopathic residency programs can be obtained from the

AOA. The clinical training, didactic program, and EM core curriculum content of OEMR programs parallels that of allopathic EM residencies. Specific rotations and educational experiences will obviously vary from program to program. The major difference lies in the incorporation of the "traditional rotating" or "EM track" internship for the PGY-1 training year. The "EM track" internships are actually very similar to most PGY-1 training years in allopathic EM residencies. Of importance to the osteopathic medical student is that some states (Florida, Michigan, Oklahoma, Pennsylvania, and West Virginia) require successful completion of an AOA-approved internship as one of the criteria to obtain an unrestricted medical license. If an osteopathic physician decides to enter an ACGME-approved EM residency program without completing an AOA-approved internship in one of these 5 states, he or she may not be able to obtain an unrestricted license to practice medicine in that state. In July 2000, "resolution 42" was passed by the AOA, which provides a mechanism for obtaining approval of an ACGME program as an AOA-approved internship. For more information, contact the AOA Division of Post Doctoral Training at (800-621-1773 ext. 8276).

Osteopathic medical students usually take the Comprehensive Osteopathic Medical Licensing Examination (COMLEX). This examination has 3 parts and is analogous to the United States Medical Licensing Exam (USMLEJ) taken by allopathic medical students. Successful completion of all 3 parts of this examination is one of the requirements to obtain an unrestricted license to practice medicine. All states accept this examination for licensure.

Late in 2001, there were 32 AOA-approved OEMR programs in 10 states. Many of these programs are smaller in resident number (minimum 2 residents per year) than their ACGME-approved counterparts (minimum 6 residents per year) and are often based in smaller hospitals. Two of the programs (Michigan State University College of Osteopathic Medicine, East Lansing, Michigan and Albert Einstein Medical Center, Philadelphia, Pennsylvania) have obtained accreditation from both the AOA and the ACGME. Graduates of these 2 programs are eligible to take either the ABEM or AOBEM certification exam. With the exception of these 2 dually-accredited programs that use ERAS (electronic residency application service), applications to any of the OEMRs should be made directly to the residency program. The OEMR selection process does not utilize the NRMP (National Residency Matching Program). At the present time, OEMR programs only accept applications from graduates of US osteopathic medical schools. However, osteopathic medical students may apply to programs that are accredited through the ACGME. More information regarding the basic standards for residency training in Osteopathic EM can be obtained from the AOA Website at [www.AOA-net.org](http://www.AOA-net.org) or from the ACOEP

([www.acoep.org](http://www.acoep.org)).

Many factors are to be considered when determining the quality of an individual training program. Smaller hospitals will often have lower emergency department (ED) volumes than larger tertiary care centers. However, this does not necessarily lessen the education of the resident. The ED volume is but one facet to consider when evaluating the strength of a residency program. A moderately busy ED may be able to adequately support a smaller resident complement and provide for a wide range of experiences and clinical encounters to adequately train future EPs. One suggested resource that can help applicants to better evaluate and compare EM training programs is Koscove's article "An Applicant's Evaluation of an Emergency Medicine Internship and Residency."<sup>3</sup> Additional information about OEMR training programs may be obtained from the ACOEP website.<sup>4</sup>

#### References:

- 1) Binder L, Jouriles N. The 2002 NRMP match in Emergency Medicine. *SAEM Newsletter*. 2002;14:18-19.
- 2) Moorhead JC, Gallery ME, Mannle T, et al. A Study of the Workforce in Emergency Medicine. *Ann Emerg Med*. 1998;31:595-607.
- 3) Koscove EM. An applicant's evaluation of an emergency medicine internship and residency. *Ann Emerg Med*. 1990;19:774-780.
- 4) <http://www.acoep.org>



## 38

International Medical  
Graduates and  
Emergency Medicine

## RESIDENT AUTHOR:

Ziad N. Kazzi, MD (Chief Resident, Emory University)

## FACULTY AUTHOR:

Christopher Lewandowski, MD, FAAEM, FACEP (Henry Ford Hospital System) & Trenna Adams, BS (Immigration Division, Henry Ford Health System)

## FACULTY EDITOR:

Carol L. Barsky, MD, FAAEM (Mount- Sinai Medical Center, New York)

## INTRODUCTION

Every year, thousands of medical students from countries all over the world apply for postgraduate training in residencies across the United States. This long, intricate, and tedious process can be very difficult and costly. International medical graduates (IMGs) are willing to navigate this process for many reasons. Some seek a higher quality of training that is provided in US medical centers. Many who are US citizens or permanent residents want to return and practice in their American homeland. Some may be in pursuit of greater economic opportunity or political stability. Others, who are foreign-born, hope to bring the unique knowledge and skills of this specialty back to their homeland for the benefit of their countrymen and to participate in establishing the specialty of EM in their country of origin. For those interested in the specialty of Emergency Medicine (EM) though, opportunities for training are very limited outside of the United States.

The process that foreign medical students or graduates undertake has three general steps. First, they must obtain a valid standard certificate from the Educational Commission for Foreign Medical Education (ECFMG). Second, international medical graduates or students must apply for and obtain a residency position. Finally, IMGs without US citizenship or permanent residence need to obtain a work-visa in order to start training. This chapter will explore these steps. It will provide students and graduates of foreign medical schools with a general overview of this delicate process and with the contact information of key agencies they need for detailed assistance.

## ECFMG CERTIFICATION

The ECFMG ([www.ecfm.org](http://www.ecfm.org)) is a private, non-profit organization sponsored by the following organizations: the American Board of Medical Specialties (ABMS), the American Medical Association (AMA), the Association of American Medical Colleges (AAMC), the Association for Hospital Medical Education



(AHME), the Federation of State Medical Boards of the United States (FSMB), and the National Medical Association (NMA). Its duty is to evaluate the qualifications of graduates of foreign medical schools who seek postgraduate medical education positions in the United States in residencies that are accredited by the Accreditation Council for Graduate Medical Education (ACGME). Through the certification process, it assures the public and training programs that minimum standards of eligibility required to apply for these programs have been met. Further, IMGs must provide proof of ECFMG certification to be eligible for taking Step 3 of the United States Medical Licensing Exam (USMLE), and in most states to obtain a license to practice medicine.

The ECFMG defines a foreign medical school as a medical school outside of the United States, Canada, or Puerto Rico that is listed by the World Health Organization in the *World Directory of Medical Schools* ([www.who.org](http://www.who.org)). A foreign medical student or graduate is one who is enrolled or has completed their training and received their medical degree from one of these schools. A United States citizen who receives a degree from a foreign medical school is considered an IMG. IMGs are often also referred to as foreign medical graduates (FMGs).

In order to obtain ECFMG Certification, applicants must provide their medical school diploma, and pass both Step 1 and Step 2 of the USMLE, the "Test of English as a Foreign Language" (TOEFL), and the Clinical Skills Assessment (CSA). Applications for these exams are available through the ECFMG. Applicants' medical education credentials will then be verified by the ECFMG. An applicant who is considered a graduate of a foreign medical school must have at least four credit years in attendance at a listed foreign medical school. All IMGs must obtain and read the ECFMG *Information Booklet* ([www.ecfm.org](http://www.ecfm.org)) and the USMLEJ *Bulletin of Information* ([www.usmle.org](http://www.usmle.org)) to guide them through the details of this process.

Step 1, the basic science exam, and Step 2, the clinical science exam of the USMLE must be passed within 7 years of each other. They can be taken as many times as needed in order to pass. However, once a passing grade is achieved, they cannot be taken again. Because EM is a very competitive specialty to match in, it is best for EM applicants to prepare thoroughly, take them once, and score highly. No pre-set scores exist that can guarantee a position in an EM residency. The exams are offered year around on a computer format through a worldwide network of over 500 testing centers through Prometric, Inc. The ECFMG acts as the registration entity by processing the application and payment, and determining an applicant's eligibility. It communicates with the National Board of Medical Examiners (NBME) which provides the applicant with a scheduling permit to take the USMLE exams. The appli-

cant schedules the test location and date with Prometric during a pre-specified eligibility period.

All applicants for ECFMG certification must demonstrate proficiency in the English language. At this time, applicants must take the TOEFL exam unless they have taken and previously passed the ECFMG English Test prior to March 3, 1999. Application materials for the TOEFL can be obtained directly from the Educational Testing Service (ETS) at their website, [www.toefl.org](http://www.toefl.org).

The CSA evaluates the applicant's ability to relate to patients, obtain an appropriate history, perform a physical examination, and produce a written record in the English language. Eleven simulated patient encounters or stations must be completed on standardized patients portrayed by lay persons, with ten of these being scored. Each encounter lasts 15 minutes followed by a 10 minute period to compose the written record. In order to take the CSA you must be an FMG or a foreign medical student within 12 months of completion of a full didactic curriculum, and have passed the USMLE Step 1 and the TOEFL. The CSA is offered on an ongoing basis in Philadelphia with a \$1,200 registration fee. It is the responsibility of the applicant to secure a visa to enter the United States in order to take the CSA. Once registration is complete, the ECFMG sends out an orientation manual and video to assist the applicant in his or her preparation for the CSA.

## RESIDENCY SELECTION

During the process of obtaining ECFMG certification, a foreign medical student or graduate must decide on which residency programs to apply to. A complete list of all ACGME accredited residencies and fellowships, for all specialties, is available in the "Green Book" or *the Graduate Medical Education Directory*. It contains a complete list of contact names and addresses. The decision about how many and which programs to apply to should be made in conjunction with an advisor, based on specific interests and personal resources. This book can be obtained from a library or a copy can be purchased from the AMA ([www.ama-assn.org](http://www.ama-assn.org)). Traditionally, and since the specialty was founded, EM has maintained through the National Resident Matching Program (NRMP) one of the highest fill rates, one that has been recently exceeding 99% year after year. Literally hundreds of US medical school graduates find themselves unmatched, while only a handful of non-US IMGs typically match in EM residency programs. The picture is brighter for US-born FMGs with 31 of them matching into EM PGY-I entry positions in 2002.<sup>1</sup> This roughly represents a 3% chance. We should note however Dr. Binder and Jouriles' very recent report on the 2002 NRMP match results for EM.<sup>1</sup> The authors noted that "a sizable increase in the supply of EM entry level positions (5 new programs and 63 positions), coupled with a modest increase in demand (increase of 34 additional US se-

niors but level independent applicants), resulted in a slight decrease in the fill rate for EM programs (98%) in 2002 compared with 99.2% in 2001. This fill rate was the second highest of any specialty in the 2002 Match (plastic surgery was highest at 100%).” This likely accounted for the minor increase in IMGs without US citizenship matching into 13 (1.2%) out of the 1073 PGY-I entry positions in EM in 2002.

Due to this exceptional degree of competitiveness, it would make sense for IMGs who wish to train in EM to apply widely in order for them to improve their chance of securing interviews in our specialty. They also should focus on programs that are traditionally in less desirable geographical areas. The importance of a qualified advisor who is well versed in EM and in EM residency training cannot be stressed enough. Their input is essential to guide IMGs in their effort preparing their EM residency application, program list, CV and personal statement.

EM applications are handled through the Electronic Residency Application Service (ERAS), sponsored by the AAMC ([www.aamc.org](http://www.aamc.org)). Most EM programs, if not all, accept only electronic applications prior to the match. The ECFMG serves as the Dean’s Office for FMGs and will coordinate the application process. Applicants must have access to the internet. Each applicant receives a unique application number, called a “token”, which provides access to the ERAS website for direct completion of the electronic application. Supporting documents (diplomas, letters of recommendation, etc.) are sent to the ECFMG, where they will be scanned and forwarded to the ERAS post office. EM residencies will review the ERAS applications and send out letters or emails to those they decide to invite for interviews.

IMGs must also register for “the Match” through the NRMP ([www.nrmp.org](http://www.nrmp.org)). The deadline for enrollment in the NRMP is usually December 1<sup>st</sup>. After the interview process is completed, applicants submit their lists of desired residencies in order of preference to the NRMP on the Rank Order List (ROL). At the same time residencies submit their ROL of applicants to the NRMP, and a computer-driven matching ensues. The ROLs are usually due by mid-February. IMGs must have passed all exams necessary for ECFMG certification by this deadline. The NRMP will verify this directly with the ECFMG in order to allow participation in the match. Essentially, IMGs must become ECFMG certified to begin residency training, but do not need to be fully certified in order to participate in the match. In EM, very few positions are available after or outside the match and are quickly grabbed by a few of the hundreds of unmatched EM applicants. These rare positions are available during “the scramble” after the match has been completed in mid-March (See chapter 14: “Scrambling for a Spot & Going outside the Match”).

## VISA STATUS

(FMGs with US citizenship or permanent residence should skip to the next section)

In order to participate in graduate medical training, IMGs who are not US citizens or permanent residents must obtain an appropriate visa for themselves and for any dependants when applicable and possible. The most common visa used is the J-1 Exchange Visitor Visa though other visa types are rarely available.

This next section (and its 5 subsections) will discuss the various visas and their associated stipulations. Since this is a very complex and dynamic area, our discussion simply provides an overview and is not intended to serve as advice for applicants. Fees, forms, and procedures change frequently under new regulations and/or judicial interpretations of the law. Therefore, it is imperative to seek legal counsel when attempting to secure a visa.

### J-1 Exchange Visitor Visa:

The J-1 Exchange Visa program was designed to promote the international exchange of ideas and skills between two countries. The ECFMG is authorized by the US Department of State to sponsor foreign national physicians as J-1 exchange visitors promoting the exchange of ideas and skills in the field of medicine. The J-1 program through ECFMG for FMGs is generally limited to a maximum of 7 years requiring annual extensions through the ECFMG. Any requests for an extension beyond the 7-year limit would require the approval of both the ECFMG and the Department of State. Applicants are required to hold a valid ECFMG certificate, have passed the appropriate exams, have an official offer for a position or a contract, and obtain a statement of need from the Ministry of Health of their country of nationality. The statement must confirm that country's need for specialists in the area that the exchange visitor will receive training, and a commitment of the trainee to return to that country (for two years) upon completion of training.

IMGs who are accepted in an EM residency program need to sign a contract with the institution. IMGs then send the signed contract along with a J-1 visa application form, the statement of need from the Ministry of Health of their country of nationality, as well as an application fee of \$140 to the ECFMG. An IAP-66 form is then released to the sponsoring institution once all the necessary documentation has been submitted to the ECFMG and the applicant's background check is complete. Once the form is received, the sponsoring institution forwards it on to the foreign national physician, who must take it to the US Consulate to obtain the visa. If the applicant chooses to change their visa status in the US, completion of a Form I-539 (with a separate \$120 fee) must be submitted to the appropriate Immigration and Naturalization Service (INS)

Service Center for processing. Times for various INS Service Centers may vary. On a J-1 visa the applicant is limited to the purpose and the sponsoring institution/program listed on the IAP-66 and cannot moonlight.

International medical graduates on a J-1 visa cannot apply for permanent residence (a green card) until they return to their home country for two years or obtain a waiver. Waivers are granted by the Department of State for one of five conditions: 1) the home government provides a "no objection" statement, 2) a request from a US government agency, 3) persecution, 4) exceptional hardship to a US citizen or permanent resident spouse or child, 5) or upon the request of a designated state department of health. IMGs who have pursued graduated medical education/training while on a J-1 are restricted from receiving waivers based on a "no objection" statement. IMGs who are accepted in an EM residency program are typically not eligible for the "Conrad State 20 program", which allows each state to offer 20 waivers per year for primary care specialties. This waiver agreement requires recipients to work for five years in an underserved area. Not all states choose to utilize this program while other states use all 20 waivers each year. Occasionally, a state such as Mississippi may extend this waiver to EM residency graduates.

We must point out, however, that the September 11, 2001 events may have permanently and considerably impacted this process. As of March 2002, the United States Department of Agriculture (USDA) has decided to end its participation in the J-1 Visa waiver program. However, several other federal agencies and state departments of health continue to serve as sponsoring agencies for J-1 visa waivers. USDA had played the "lead federal role" in seeking the waivers; state health departments also are permitted to seek waivers. In June 2002, the US House of Delegates voted to grant the state-request program a two-year renewal and allow each state to request 30 waivers per year, compared to the 20 waivers permitted under current law. A similar bill under consideration in the Senate would make the program permanent.

#### J-2 Visa -Dependant of an Exchange Visitor:

The J-2 visa is intended for the dependants (family) of the J-1 visa holder and is limited to the same time period as the J-1 visa. Extensions can only be obtained after the J-1 is extended. They also have the same requirements for return to the home country for at least 2 years upon completion of their authorized stay in the United States. A J-2 visa holder can obtain work authorization from the INS through Form I-765 for a fee of \$120. The J-2 visa holders' permission to work is granted by the INS through issuance of an employment authorization card called the EAD card. The EAD card coincides with the same time periods as the J-1 and allows the holder to pursue any legal employment. The J-2 status is dependant on the status of the J-1 visa holder, so that if the

J-1 visa holder receives a waiver to remain in the US, then the J-2 also receives a waiver and is then able to apply for another visa such as an H-1B or permanent residency status.

#### H-1B Visa:

The H-1B Visa is for temporary workers in a specialty occupation (requiring a minimum of a 'Bachelors' degree) that is generally limited to 6 years, granted in 1-3 year increments. For physicians, this would include residency and fellowship time. It is a highly desired visa because it allows direct application for a green card. There are limited numbers of H1-B visas issued each year. Recent regulations have allowed certain employers, such as institutions of higher learning and their nonprofit affiliated entities, exemption from this cap. Like the J-1 visa, once the visa expires there is a requirement to return to the home country, though only for 1 year. Unlike the J-1 visa, a waiver is not required to obtain a different visa status or permanent resident status.

The program that contracts an IMG must agree to sponsor him or her on an H-1B and to petition the INS ([www.ins.usdoj.gov](http://www.ins.usdoj.gov)). Such a program needs to file forms I-129, I-129 supplement H, I-129W (with \$110) and an additional \$1,000 education fund fee. Employers are responsible for the filing fees and in many instances the attorney fees. Regulations that have exempted certain employers from the annual H-1B visa cap have also defined employers that are exempt from the \$1,000 education fund fee. The H-1B visa limits the applicant to the duties and the location that is specified on this petition.

To begin the process, the employer files a Labor Condition Application (Form ETA-9035) with the Department of Labor ([www.dol.gov](http://www.dol.gov)). In order to file a Labor Condition Application, the employer must perform a wage determination of the "prevailing wage" and the "actual wage" and pay the higher of the two. Thirty days before filing of the Labor Condition Application, public notice must be posted of intent to hire an FMG. If a union is in place, the bargaining representative must be notified.

FMGs who have passed the appropriate exams (USMLE 1, 2, and 3; FLEX 1 and 2; or NBME 1, 2, and 3) and have a state medical license are eligible for H1-B visas. However, some states require a visa in order to obtain a medical license which then forces IMGs to secure a J-1 visa - making them ineligible for the H1-B status. It may take anywhere from one to six months to complete this entire process. Furthermore, US Consulates are not allowed to grant H1-B visas any earlier than 10 days prior to the start date on the INS approval notice. The FMG, therefore, may not have sufficient time to obtain an H1-B visa prior to the start of the academic year. A new program from the INS called "Premium Processing Service" (Form I-907) allows H1-B petition processing within 15 days for an additional fee of \$1,000, or your money back. Because it is



expensive, time consuming and cumbersome for the employer to sponsor H-1B visas, EM residencies usually do not sponsor this type of visa.

### F-1 Student Visa:

The F-1 student visa is for those engaged in a full course of study and is applicable for students in elementary school through medical school. Students are allowed to stay in the US until they complete their degree and may engage in employment that is directly related to their field of study through Optional Practical Training (OPT). OPT can be granted for up to 12 months after the degree is awarded. This allows applicants on the F-1 visa to convert it after the start of the PGY-1 year. INS authorization (via Form I-765, Application for Employment Authorization) for an EAD card is required unless the PGY-1 year was specified by the Designated School Official (DSO) on the original F-1 student I.D. Form (I-20 Form).

### Other:

Many other types of visa programs exist, but they do not apply to foreign medical graduates who are seeking EM residency positions. Applicants are often interested in becoming permanent residents or obtaining waivers. Obtaining the green card, or permanent resident status, can be a difficult process. There are numerous paths to lawful permanent residence described on the INS website, [www.ins.doj.gov](http://www.ins.doj.gov). It is prudent to obtain the assistance of an attorney to assist with this process.

## THE SPECIAL CASE OF CALIFORNIA

FMGs applying to programs in the state of California must include an *Applicant Status Letter* from the Medical Board of California in their ERAS application. The *Applicant Status Letter* must be obtained from the Licensing Program of the board by completing a packet of information. It serves to verify that the applicant's medical education meets the standards for medical licensure in the State of California. Detailed information can be found at [www.medbd.ca.gov](http://www.medbd.ca.gov). Go to "Services for Applicants," then to "International Medical School Graduate Applicants," and finally to "Postgraduate Training Registration and Information to Obtain an Applicant Status Letter."

## HELPFUL HINTS

At this time, positions in EM residency programs are extremely difficult for IMGs to obtain. There are a few steps that IMGs can do to enhance their chances of matching. Even though no specific scores will guarantee acceptance, a very high score on the USMLE Step1 and Step 2 exams will certainly make you a more attractive candidate. Next, demonstrating a strong command of the English language is mandatory and essential in order to properly function in an emergency department (ED). Successfully completing an EM clerkship (or

two) in the US is also imperative. This will allow you to demonstrate your personal abilities, to get to know faculty who can write letters of recommendation, and to assess the specialty. During your EM clerkships, you should inform the faculty of your career plans and be able to demonstrate a strong knowledge base and work ethic.

Some of these other activities may also enhance your application: participation in EM organizations (the American Academy of Emergency Medicine [AAEM] and its Residency Section (AAEM/RES), the Society for Academic Emergency Medicine [SAEM], the American College of Emergency Physicians [ACEP], the Emergency Medicine Residents' Association [EMRA], etc.) or in EM interest groups, attending national meetings, obtaining pre-hospital or Emergency Medical Services (EMS) experience, or doing tag-along shifts at the programs where you interview. Research, publications and scholarly projects would demonstrate a strong academic interest. A scholarly focus in EM or a publication in the EM literature demonstrates a strong commitment to EM and substantiates the applicants' genuine awareness of the specialty, the career and the challenges entailed. Apply widely though it can become expensive. Apply wisely and rely on a qualified EM advisor.

Last but not least, please note that all fees and procedures we are describing in this chapter are subject to change and should be established and confirmed with the appropriate agencies.

## SUMMARY

As the specialty of EM gains recognition around the world, an increasing number of US citizens graduating from foreign medical schools and of non-US citizen IMGs will be applying for EM residency positions. Currently, the popularity of EM among US medical school graduates makes it nearly impossible for FMGs to enter US programs. Nevertheless, there are many high quality applicants from foreign medical schools whose applications deserve consideration. These applicants face significant hurdles as they must navigate relatively complex processes simultaneously. They must obtain ECFMG certification, apply and interview for highly competitive residency positions, and, in the case of non-US citizens or legal residents, timely secure the proper visas and certifications for electives, interviews and training.

## References:

- 1) Binder L, Jouriles N. The 2002 NRMP Match in Emergency Medicine. SAEM Newsletter. 2002;14:18-19.



## APPENDIX

- The Educational Commission for Foreign Medical Education (ECFMG) ([www.ecfm.org](http://www.ecfm.org))
- The World Directory of Medical Schools ([www.who.org](http://www.who.org))
- The United States Medical Licensing Exam ([www.usmle.org](http://www.usmle.org))
- The Educational Testing Service (ETS) ([www.toefl.org](http://www.toefl.org))
- The Graduate Medical Education Directory ([www.ama-assn.org](http://www.ama-assn.org))
- The National Residents Matching Program (NRMP) ([www.nrmp.org](http://www.nrmp.org))
- The Electronic Residency Application Service ([www.aamc.org](http://www.aamc.org))
- The Immigration and Naturalization Service (INS) ([www.ins.usdoj.gov](http://www.ins.usdoj.gov))
- The Department of Labor ([www.dol.gov](http://www.dol.gov))
- The Medical Board of California ([www.medbd.ca.gov](http://www.medbd.ca.gov))
- The American Immigration Lawyers Association(AILA) ([www.aila.org](http://www.aila.org))
- The Department of State ([www.state.gov](http://www.state.gov))

## 39

Gay and Lesbian  
Issues in Emergency  
Medicine

## RESIDENT AUTHOR:

Christopher Souders, MD (University of Rochester, New York)

## FACULTY AUTHOR:

Linda L. Spillane, MD (University of Rochester, New York)

## FACULTY EDITOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Louisiana State University, New York)

"Gay and Lesbian Issues in Emergency Medicine (EM)" can be summarized with two statements. First, as an EM resident or physician, you will have homosexual patients. Second, some EM residents and physicians are homosexual. Remembering this can guide your actions and thoughts in a more positive and productive manner during your practice of emergency medicine. Difficulties arise when homosexual medical students and physicians are confronted with the dilemma of "coming out" during their residency application period, training, and practice.

In 1996, the American Medical Association's Council on Scientific Affairs released its report entitled "Health Care Needs of Gay Men and Lesbians in the United States."<sup>1</sup> Worth reading by all, it warns against assuming all patients are heterosexual. Many gay men and lesbians fear disapproval or compromised treatment if they disclose their sexual orientation. The report notes a 1992 study in which 44% of gay men did not reveal their sexual orientation to their physician.<sup>1</sup> A physician who does not determine sexual orientation and sexual behavior, and who realizes that these are distinctly different entities, may overlook risk factors to that patient's health that can lead to failure to screen, diagnose, or treat important medical problems. Physicians should avoid judgmental statements and the assumption of heterosexuality, taking care to avoid 'heterosexist' language when interviewing patients. The use of inclusive questions and comments helps to put many patients at ease. For example, when assessing sexual activity, the provider should ask about the patient's partners, instead of the opposite gender boy/girl friends. It is very important to remember that specific activities, not sexual orientation, put people at risk.

The rest of this chapter addresses questions that are important to gay and lesbian applicants in particular. We hope that our answers will be useful to them and to the rest of our readers in dealing with the issues which we are discussing.

## CAN GAYS AND LESBIAN APPLICANTS BE "OUT" DURING EM RESIDENCY APPLICATION?

Of course the answer is yes, a gay or lesbian applicant can be "out" during the application process. But *should* he or she be "out"? Unfortunately, this is a very personal question with no easy answers. One recent study investigating physician attitudes towards gay and lesbian medical school applicants shows that homophobia is still a valid concern. In one institution, 4.3 % of academicians would oppose admitting gay or lesbian applicants to medical school.<sup>1</sup> These results may or may not be applicable to residency application as well.

There are several issues to consider. Generally speaking, physicians honor honesty and integrity. By being "out" on the residency application or during the interview, a gay or lesbian applicant is being honest with the program and showing them his or her entire self. Ideally, one would gain greater respect by being "out" during this process. Additionally, most gay or lesbian residents would say that they would prefer to work and train in a place that accepts them as a gay or lesbian person. By being accepted as such, the stress of being closeted would not hamper related interactions with the program. By being "out" during the interview or application process, those programs that will be more or less friendly to gay or lesbian applicants will become obvious to them.

On the other hand, some would argue against "coming out" in the application due to the risk, although probably small, that this could jeopardize the applicant's chances of being ranked by that program. Although a program may be supportive overall, there is no guarantee that an individual interviewer does not have homophobic feelings that could affect a gay or lesbian applicant's ranking in an otherwise excellent program. Additionally, not to be "out" through the application and during the interview may cause the applicant's experiences to seem limited. Should he or she leave off volunteer work with gay/lesbian organizations? Should he or she ignore leadership positions held in various gay/lesbian organizations? By doing so, one's résumé is not a full representation of his or her activities and future potential that may be harmful to his or her acceptance into a program.

It is important to remember that most program directors are looking for residents who are intelligent, hard working and who get along with other people. Although important to the individual, sexual orientation is not a criteria used to select applicants for interviews. Just as an applicant's heterosexuality is not a topic of discussion at the interview, neither is an applicant's homosexuality. During the interview process, gay or lesbian applicants may find themselves having to make choices about coming "out" if asked questions in reference to their activities or in small talk about friends and family. Applicants can typically get a sense of the comfort level of the program or interviewer and

make choices about "coming out" during individual interviews.

Gay and lesbian applicants who would like to find out more about an institution's or program's anti-discrimination policies can make inquiries about the presence of residency or hospital nondiscrimination policies and about the availability of domestic partner benefits. They can ask about the presence of a gay and lesbian student organization at the medical school or institution and ask for the name of a contact person to speak to. A cross-reference check of the Gay and Lesbian Medical Association ([www.glma.org](http://www.glma.org)) membership list, which can only be accessed by members, will list gay and lesbian physicians, residents, or medical students in the towns in which they are interviewing. A quick call to them is most informative and generally very well received. Lastly, the American Medical Student Association (AMSA) gay and lesbian student section ([www.amsa.org/adv/lgbpm/lgbpm.cfm](http://www.amsa.org/adv/lgbpm/lgbpm.cfm)) has an online survey rating various residency programs and their gay friendliness. Though not complete, it may contain the program individual applicants are interested in, or another one at the same institution.

#### CAN GAY OR LESBIAN APPLICANTS BE "OUT" TO COLLEAGUES DURING HIS OR HER RESIDENCY TRAINING AND CAREER?

After starting a residency program, one has to decide how "out" to be. This question comes up on a daily basis as gay or lesbian residents interact with their fellow emergency medicine residents, faculty, nurses, and support staff. Interactions during off-service rotations and with ED consultants will involve conversations where one's social/personal life will come up. How to handle casual questions about having a partner or about what one did over the weekend can be difficult. Ideally, it would be nice to be upfront and honest about everything. It will be up to the individual gay or lesbian resident, however, to decide his or her level of comfort and the amount of personal information he or she wishes to share.

The majority of residency training will be spent with EM faculty and residents. There will be many social situations that provide opportunities to disclose one's orientation. If a gay or lesbian resident was "out" and accepted during his or her interview, then things should be easy and go well. If he or she were not "out" during the interview, it may be wisest to assess who would be the most responsive or accepting person to share this with and casually let one's homosexuality be known. Another gay or lesbian resident or faculty can be a valuable asset here, but may not be available or known. Additionally, if a gay or lesbian resident is in a relationship, he or she will have to decide how and if to incorporate their partner into work social events. Bringing one's partner to the ED picnic is certainly one way to come out to everyone!

A serious concern is what to do about faculty, residents, or staff that are

known, or felt to be unfriendly to gay or lesbian residents because of their sexual orientation. One may feel that his or her advancement or training is impaired solely because of another's homophobia. Ideally, this situation could be avoided by investigation during the interview process, but one cannot truly get a feel for the entire program until he or she is in it. If a gay or lesbian resident is in a situation and feels that he or she is being harassed or treated unfairly, he or she should identify an organization or individual within the institutional structure that can provide support. He or she should investigate the nondiscrimination policy and do not be afraid to approach senior officials. Remember that it is the program's responsibility to train residents to the best of their ability, and that residents are entitled to work in a non-hostile environment. If a particular individual is being troublesome, it is important to act in a professional and civil manner while issues are being resolved.

How does one incorporate their 'domestic partner', if one has one, into their life as an emergency physician, both professionally and socially? Partnered gay/lesbian emergency physicians encounter many of the same stresses that heterosexual relationships encounter in residency. The long work and study hours, the stress at work, the need for down time at home, and other things can place stress on a relationship. Much has already been written about heterosexual coupling and facing medical residency. The website [www.medicalspouse.org](http://www.medicalspouse.org), which includes a subsection on gay and lesbian partners, has information about residency and the effect on couples. The information here can be helpful. Other great resources are the national AMSA and GLMA annual meetings. There is programming specifically for medical spouses and a great opportunity at meetings to meet and talk with other gay/lesbian medical spouses.

### CAN ONE BE "OUT" TO PATIENTS DURING THEIR RESIDENCY TRAINING AND CAREER?

As emergency physicians, our primary responsibility is to our patients. The goal of every interaction is to improve their well-being. Knowledge of one's sexual orientation is usually not relevant or helpful to patient care. The ED is not a place to make political statements or to "act up." Generally speaking, one's personal life will not come up as a matter of discussion in interactions with patients, but if it does in a question such as, "Are you married?" thought needs to be given to the answer. Depending on the situation, "Yes, I have a partner," might be the best response.

Should one come "out" to their gay/lesbian patients? This is also a personal choice and depends on whether this disclosure benefits the patient's wellbeing. Sometimes a patient will identify themselves as being gay or lesbian by telling you directly, introducing their partner, or by wearing identifying gay apparel

such as rainbow pride rings or other accessories. It is generally felt that there is a mistrust of the medical profession by gay and lesbian people, and this is one area where being a gay or lesbian physician can help. There are occasions when it may be comforting to the gay or lesbian patient to know that their provider is gay or lesbian. To identify himself or herself as gay or lesbian, many physicians will wear identifying jewelry such as a lapel pin. A physician can make a reference to a partner or share a common experience as well.

## CONCLUSION

Overall, the choice to be "out" during the application process and during residency is highly individual. The importance one places on that aspect of his or her life, and how important it is to share that with others, is fundamentally a personal decision. Many residents have a great residency experience while being "out." Others make the choice, for one reason or another, not to disclose their sexual orientation and that works best for them. Over time, gay and lesbian residents may be more in the closet or more out of the closet depending on the situation they are in. The most important thing is to complete residency training and to maintain a personal sense of well-being while doing so.

## References:

- 1) American Medical Association. Health care needs of gay men and lesbians in the United States. *JAMA*. 1996;275:1354-9.
- 2) Fitzpatrick R, Dawson J, Boulton M, McLean J, Hart G, Brookes M. Perceptions of general practice among homosexual men. *Br J Gen Pract*. 1994;44:80-2.
- 3) Ramos M, Téllez C, Palley T, Umland B, Skipper B. Attitudes of physicians practicing in New Mexico toward gay men and lesbians in the profession. *Acad Med*. 1998;73:436-8.



# 40 How to Deal with Illness, Disability and Unexpected Crisis During Medical School and Residency

## RESIDENT AUTHOR:

Christopher Sterrett, MD (University of Southern California, Los Angeles)

## FACULTY AUTHOR:

Carol L. Barsky, MD, FAAEM (Mount-Sinai Medical Center, New York)

## FACULTY EDITOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Louisiana State University, New Orleans)

## INTRODUCTION

My memory of medical school is that I did not have time for anything besides medical school. I know that this is not completely true, but it almost is. I thought undergraduate school was difficult until I got to medical school. There was a continuous onslaught of vast quantities of new material. It was not that the material was difficult to understand; it was the sheer quantity of it. Of course, everyone's experience is different and varies due to individual desires, goals and abilities. All I know is, I liked to workout and I did not have the time to workout as much as I wanted to. I liked to cook and have dinner parties, but did not have the time to do this as much as I would have liked to. I felt like my time was not my own. Medical school is demanding and stressful and it does not bend or yield to perturbations. This is why illness, disability and unexpected crisis can be a very challenging thing to deal with during medical school.

## OUR LIVES AND VULNERABLE REALITY

"It is not going to happen to me," I know. Now, I do not want to sound negative or morbid, just realistic. When you think about it with a large class, let us say 150 or so, intuitive probability dictates that something "bad" is going to happen to a few people during four years. You can imagine the pressure put on marriages and relationships by the demands of medical school and all the subsequent "break ups" and divorces. I do not know the statistics, but it happened a lot in my class. Here are some of the more dramatic events that occurred during my medical school career: a person got leukemia, another got colon cancer and subsequently died, still another was kidnapped at knife point and was held captive, and yet another got into a severe motorcycle accident losing one of his legs below the knee. I know, "What an idiot!" "In medical school and still riding a 'donor' cycle... Some people just do not have common sense." I should know because I was the person who lost a leg. Hopefully I will be able to share my experience here and it will benefit someone somewhere down the road.



## MY FIRST PRINCIPLE

In my case it was just another day. I got on my motorcycle after dinner and was riding back to school to study. As I was going through an intersection another driver turned left into me altering the course of my life. Little did I know that my medical school class was rallying in my support the very first day I was absent. The love and support that my colleagues gave to me was incredible. Their belief in me was a big factor in my being able to continue on, after convalescing, and finish medical school. This illustrates the first important principle for those who will suffer an unexpected crisis: *let others know what is happening*. The worst thing you can do is believe that you are isolated, that you are different, and that no one else can understand. This is unhealthy, and it simply is not true. Once I got out of the hospital and was hobbling around on one leg otherwise healthy looking people would tell me about their hepatitis C, their cancer, their colostomy. Looking at them I would have never thought that these people had anything wrong. This applies to the people around you. Chances are there are those who are going through, or have gone through something similar to what you are facing. Furthermore, where could you possibly find a more empathetic group of people than in medical school? Let the faculty know as well. My experience is that they want you to succeed and they will help make arrangements to accommodate your needs. So, to reiterate the first principal: drop the pride and let others know what is going on. Chances are that you may not be able to bear the weight alone, and that you do not have to.

Some people may have difficulties that they do not feel comfortable sharing with just anyone. Some problems may be better shared with individuals who understand particular difficulties. For example, those who suffer from problems with alcohol and drugs may better find support in groups like Alcoholics Anonymous. Those with a homosexual orientation may feel more comfortable in a Gay and Lesbian group. Most universities have programs that can be of use to specialized groups of people. In my case, I got involved with the Office for People with Disabilities. They were able to direct me to scholarships for financial aid after my accident.

Now when I was in the hospital, despite all the love and support I received, I had doubts... I had doubts that I would ever be able to make it through medical school, let alone lead a normal life. One of my friends, sensing my doubts and insecurities, introduced me to a fellow who had lost his leg at the hip due to a childhood illness. He came to my house with a photo album of his life and his accomplishments. He played basketball with one leg, undertook extended bicycle trips, got married and made it through medical school. He helped me see the possibilities and get motivated. I started to tell myself "If he did it, so can I."

### MY SECOND PRINCIPLE

Since that time I have met other people with disabilities. There are those who do not let their disability stop them. They rise to the challenge, pressing the limit of possibilities. There are others that I have also met who seem to be overwhelmed by their disability. Those who just cannot get past the question: "Why me?" I wanted to follow the advice of the first group. I call them the "I can" variety. By associating with them, I felt the possibilities rather than the limitations of my disability. I certainly felt sorry for myself. However, I tried, the best I could, to stay focused on my goals. It was my association with such positively-minded people that helped me to succeed. This illustrates the second important principle that helped me: *associate with the "I can" variety of human being. Befriend those who have made it out of the other side. Use them as your role models.* This will let you know that you can too, and because you can, we all can. Hang out with people who have vision, because you need the same outlook to make it through medical school, especially when unexpected calamity befalls you.

A corollary to the above paragraph is that there are many examples of "winners" in the literature, presenting another effective resource to get motivated. While I was in the hospital, a staff member at the medical school got me a book named "One Tough Marine." It was the autobiography of First Sergeant Donald Hamblen, a marine who lost his leg during a parachute operation and who, despite all odds and others' opinions, was able to stay in the Marine Corps until retirement. He did not just stay in the Marine Corps; he had to pass the strenuous physical exam which included running five miles with a time limit and jumping over a trench carrying a man on his shoulders all with a prosthetic limb! After he was finished with the obstacle course, he emptied a pint of blood out of his prosthesis! What motivation! Afterwards, he went on to lead clandestine missions during the Vietnam War. This was a remarkable man and his story motivated me in powerful ways. A man said that you would be the same person you are today in five years except for two things: the people that you associate with and the books that you read. The libraries are full of books about people who struggled against adversity and came out on top. This is the type of literature that can help us when we are faced with difficulties.

### THE THIRD PRINCIPLE

The quote, "Nothing is good or bad except that the mind makes it so," illustrates the ultimate frame of mind one could hope for or perhaps choose when struggling through difficult times. *Maintain a positive attitude and mindset.* This is the third critical principle. Seven years have passed since my accident

and things have changed for the better. I have learned to deal with my disability to the point that it does not really bother me anymore. Putting on my prosthesis is like putting on a really expensive high heel. There are certainly activities that I like or used to like to do that I can no longer do. I have found other activities to replace them. I use to like long distance runs; now I mountain bike. I can do most of the things that I used to do, maybe just not as fast or with certain limitations. I cannot go as fast with fins when SCUBA diving. So what? This takes some adjustments that came to me with time.

The thing that I never expected was the development of my ability to encourage people who are facing the same thing that I have gone through. When I see people who have just lost one of their limbs going through the corridors of the hospital in a wheelchair, I make it a point to go show them my prosthesis and tell them a little of my story. I get to watch their face light up with hope. This is a gift that I get to experience because of what I went through. I believe that everything "bad" that we experience can serve us to help others in the future. We can give others hope in their moment of need. In addition, every obstacle that we surmount serves to make us stronger. In other words, the loss that seemed so bad to me in the beginning turned out to have many positive consequences. Out of the seeds of a hardship many good things came through. They took time and effort and certainly were out of my grasp or understanding at the time of my accident.

#### THE FOURTH PRINCIPLE: TAKING AN HONEST LOOK!

I often ask myself what would have happened had I lost my arm. I consider myself fortunate that my disability did not stand in the way of becoming an emergency physician (EP). You see I wanted to go into Emergency Medicine (EM) in my first year of medical school. I did not know all that there was to it, but it seemed a good "fit" to me. You know how we humans are: we get focused on something and stubbornly refuse to look at other options. I believe that if it had been my arm instead of my leg I would have had to choose another specialty. There are those of you who after steering yourselves toward a certain goal will need to change your course because of difficulties that may beset you. In a circumstance like this, you will need to step back and apply the fourth principle: *reevaluate your situation honestly*. For example, even if I could become an EP with one arm, would I be able to deliver appropriate care to my patients? Would I be able to perform all the required procedures that are necessary of an EP? Would I be able to share the workload with my colleagues? I believe that the answer is "No" to these questions. I also believe that I would have needed to choose an alternative career. Though there is a time for stubborn persistence there is also a time for an honest reevaluation, and it is wisdom and maturity that aids in this distinction.

## THE FIFTH PRINCIPLE: QUESTIONS THAT ONLY YOU CAN ANSWER

There are those of us who may have other disabilities to deal with such as being positive for HIV or for hepatitis B or C. The US Supreme Court decided that being HIV-positive is a disability in accordance with the Americans with Disability Act. Those of us with this challenge will have to decide 1) if there is a significant risk of transferring this disease to your patients, and 2) if you are willing to take this risk. This addresses principle five: *will your disability place your patients at risk now or in the future?* Ethically, this is not an easy question. Although evidence has shown that the risk of transmission from physician to patient is extremely low the Center for Disease Control and Prevention (CDC) recommends and some of the state laws require disclosure by the physician to the patient. This is a topic that one could write an entire paper on. It is an important consideration to include, and one that I just wanted to raise to foster further thought about.

I would like to touch briefly on people that may have relapsing conditions like lupus, leukemia/lymphoma or other types of cancers. There is not really much to say other than what we already know. Namely, no one knows what the future has in store for us. To those who have the possibility of relapse into a disease that is currently in remission, the future may seem to varying degrees unclear. I say "Continue," "Press on," and go into or complete your EM training or practice if this is really what you want to do. The caveat may be to hedge your bets for the future (more on this below). For those that have chronic diseases, like rheumatoid arthritis, where in the future you may not have the manual dexterity to perform the work required in EM, it would be prudent to think of alternatives for the future. Maybe that would include looking and preparing for a future administrative position. Getting a Masters in Business Administration (MBA) could be a way to facilitate such a transition. In truth, the possibilities are numerous and often only limited by one's imagination. But this will take foresight and being honest with yourself and others about your condition.

## THE SIXTH PRINCIPLE: HOW TO TAKE TIME-OFF

I would like now to speak of some of the practical issues in dealing with situations that require taking time-off. In medical school, this may not be that great of a problem. You may simply need to take an extra year to learn the material that you missed. This is what I had to do. This, however, will certainly lead to extra expense such as another year of tuition, room and board, missing a year of potential income, and the accrual of interest on any loans you may have.

In residency, this may be a little more complicated because of one's employee status. Also, in a residency program where the residents are already

overworked, one person taking time-off will certainly put further burden on the rest. This may breed animosity. This is not to say that extenuating circumstances do not merit taking time-off and that residents do not have empathy. The sixth principle is applicable here: have insight to the needs of others. If and when possible give your colleagues a heads-up. Two women in my residency became pregnant. They made arrangements well before their due date to trade shifts with others. This allowed a fair schedule to be maintained. It is important to know that, if one resident were to quit a residency program after the first year of training in a program of 10 residents, a significant amount of work would be added to the schedule. Using a conservative estimate of four 12-hour shifts per week, this would result in the addition of 23 extra shifts over the next two years to their colleagues. This adds 277 hours or 7 extra 40-hour workweeks to an already overworked schedule. It is important to consider your fellow residents when taking time-off. It is also important, to the best of your ability, that you make the right decision when picking a specialty and a residency program. This can help to prevent you from becoming disillusioned, which can result in you wanting to leave your program or to change your career. So let me reiterate, if there is something that you know is coming up and that you already know will require you to take time-off for, maybe a surgery that is scheduled in advance, a baby that is on its way (not to say that pregnancy is a disability) or some other such thing, I believe that the burden of responsibility is on the resident to find people to cover his or her shifts. If and when possible, switch your clinical rotations and vacation time around to accommodate your needs and limit the toll on your colleagues. Of course, this will not always be possible, but an attempt should at least be made. Your colleagues and program will appreciate that effort and probably support you better through future needs. It is our responsibility to work our shifts and not leave, when we can or could have, extra burden to our residency colleagues.

#### THE SEVENTH PRINCIPLE: DISABILITY INSURANCE

I would like to save the most important principle for last: *disability insurance is essential*. You would not drive your car without insurance. You should not work as an EP or go to medical school without disability insurance. It was mandatory for us to have it in medical school and I was glad. Left to my own devices, I probably would not have gotten it. However, I certainly learned my lesson and found this mandatory requirement most fortunate. The money that I received during my convalescence was very helpful to maintain the dignity and comfort of my household. Though disability insurance is rather expensive, it is well worth it. Again, I know that nothing "bad" will happen to you healthy people out there. Just remember in the language of those with disabilities you are known as "TABs" or temporarily able-bodied people. Get disability insur-

ance! Understand the types, coverage, caveats and limitations. Be attentive to the time period of disability that is required before you become eligible for payments. Seek the type that will cover you for your ability to practice your own specialty and not only medicine in general. Seek to cover future potential income in the case of a permanent disability and not only your earnings as a resident.

## CONCLUSION

In summary, the seven principles I described helped me get through the challenge of a disability in medical school. I would like to reiterate that it was important for me to share with other people what was going on in my life and to accept their support. This included the faculty who was also interested in seeing me successfully complete medical school and residency. Remember, there are specialized groups and offices for those with particular problems. If you need to take time-off, this is certainly possible. However, remember that during residency this will place added strain on your colleagues, and that it is first our responsibility, if we can, to work our shifts or to find others to work them. Overall, EM remains to me a challenging and rewarding profession. With hard work, discipline and the right motivation, most of us will be able to succeed even when an unexpected crisis arises.



## 41

## Pregnancy During Medical School and Residency

## RESIDENT AUTHOR:

Jeannie Tsai, MD (University of Southern California, Los Angeles)

## FACULTY AUTHOR:

Margaret O'Leary, MD, MBA, FAAEM (The MBA Programs, Benedictine University, Illinois)

## FACULTY EDITOR:

Carol L. Barsky, MD, FAAEM (Mount-Sinai Medical Center, New York)

All physicians face many challenges balancing career and family. For female emergency physicians (EPs), the vigorous training requirements of medical school, internship and residency preclude an ideal time to have a baby. Emergency medicine (EM) is physically and mentally demanding; residency is time-consuming. Women who want to build a career and have a family need a strong support system with reliable childcare, and good backup if the child is ill. For many residents, the senior year of residency, with more elective time and fewer clinical hours is the best of the residency years to have a baby. Many other women wait until training is finished to have children with the attendant downside of an increased risk of infertility.

When is the best time to tell the residency director and colleagues about a pregnancy? Tell them as soon as possible. The residency director needs to be informed so there is time to plan ahead and work out alternative schedules. Pregnant physicians may prefer to delay announcing the news widely until the end of the first trimester. But there are also advantages in letting others know earlier. For example, colleagues will be able to provide early warning about violent patients, patients with communicable diseases, and portable x-rays being shot in close vicinity. In some cases, morning sickness during the first trimester may cause a pregnant physician to miss some time at work. Open communication is essential to bridge through this period.

## MATERNITY LEAVE

The best way to incorporate having children with residency training is careful planning. Unlike most professionals, pregnant residents have more difficulty taking a fixed amount of time off before the baby is due. Pregnant residents may want to consider working as long as possible before delivery, provided they are physically up to the challenge and the baby's well being is not threatened. If time off does become necessary prior to term, the pregnant physician must put her health and that of her unborn child first. Working as



close as possible to term may provide the pregnant physician with extra time off following the baby's birth and minimize disruption for colleagues. For some women, a twelve-hour shift near term is well worth the extra time spent with the new baby after the delivery.

EM shift work lends itself to creative scheduling. One resident EP worked extra hard during her pregnancy by performing extra shifts, which other residents repaid after the baby was born. Although it is not always easy to schedule a pregnancy, women who become pregnant can schedule vacation time around the due date. The first rotations when going back to work should be lighter electives, allowing time to gradually integrate the balance of motherhood and work.

### KNOW YOUR RIGHTS

The Pregnancy Discrimination Act, an amendment to Title VII of the Civil Rights Act of 1964, states that discrimination on the basis of pregnancy, childbirth, or a related medical condition constitutes unlawful sex discrimination. Women affected by pregnancy or related conditions must be treated in the same manner as other applicants or employees with similar abilities or limitations. Pregnant employees must be permitted to work as long as they are able to perform their jobs. Employers must hold open a job for a pregnancy-related absence the same length of time as for employees on sick or disability leave. Pregnancy-related benefits may not be limited to married employees. If an employee is temporarily unable to perform her job due to pregnancy, the employer must treat her the same way as any other temporarily disabled employee.

The 1993 Family and Medical Leave Act applies to employees who:

- 1) Have worked for the same company for at least 12 months
- 2) Have worked at least 1,250 hours in the past year
- 3) Work for a company with at least 50 employees with 50 other employees within 75 miles of the work site.

The Family and Medical Leave Act states that such employees are entitled to:

- 1) Take a total of 12 weeks off work without pay
- 2) Keep any existing health insurance
- 3) Return to the old job, or a job with equal pay, status and benefits, when returning.

### BREAST-FEEDING

Many physicians with a hectic lifestyle wonder how they will be able to breast-feed once back to work. It can be done. One of the authors, whose daughter is nine months old, is still breast-feeding without any formula supple-

mentation. Before returning to work, it is best to train the baby to take a bottle. The bottle can be introduced at about three weeks of age when the baby is old enough to avoid nipple confusion, but young enough to adapt.

Once back at work, successful breast-feeding requires lots of pumping. Women anticipating a return to work should begin storing a supply of milk at home in the freezer. Investing in a good pump is crucial to maintaining one's milk supply. During a typically busy shift, it is often very difficult to find time to pump. However, women who wish to continue to breast-feed learn to make time. An electric hands-free double pump is best because it allows physicians to write charts while pumping. Pumping two or three times during a 12-hour shift allows one to maintain one's milk supply.

Finding a place to pump can be difficult. One approach to identifying a safe place is to ask a sympathetic faculty or staff member for a key to her or his office. If this is not a possibility where you work, schedule a visit to the human resource or personnel services director to ask for assistance in identifying a room suitable to your needs. Some hospitals have on-site daycare, which is ideal for many residents. This allows mothers to breast-feed naturally during their shift. Some residents opt to have their spouses or significant others bring the baby to their workplace once or twice during the shift for the baby to breast-feed.

Mothers should be expert about their options. Each mother's situation is different, making this decision an individual personal choice. If it is important for a mother to take more time off to be with her newborn, she should do so. One of the authors took four months off after delivery and made up the rotations afterward. This prolonged her residency and graduation but enabled her to spend the first few months of life with her infant. Although not well publicized, there are part-time and shared residency slots. These are important to seek out or even create with the help of the residency director. Male as well as female residents may want to share a residency. The downside of a part-time residency is, of course, a longer residency.

Pregnancy and motherhood are natural progressions in the cycle of life, which all women, including female physicians, should be able to enjoy without damaging their careers. These deeply fulfilling, warm, and loving events can bring joy even if they occur during the most stressful time in one's career. Careful planning and ongoing communication with supervisors makes it possible to have both.



## 42

Drug and Alcohol Use  
During Medical School  
and Residency

## RESIDENT AUTHOR:

Tobey Williams, MD (Louisiana State University, New Orleans)

## FACULTY AUTHOR:

Peter M.C. DeBlieux, MD, FAAEM, FACEP (Louisiana State University, New Orleans)

## FACULTY EDITOR:

David A. Wald, DO, FAAEM, FACOEP (Temple University, Philadelphia)

## INTRODUCTION

Most of us who go into the field of medicine are high achievers, and are therefore often faced by unrealistic expectations held by others and by our egos. From our early years in medical school and throughout residency, we are asked to assimilate incredible amounts of information in limited time. Often during the first 2 years of medical school we are in the classroom for 30 hours each week and may spend another 30 or 40 hours studying. The clinical years are equally intensive. As a 3<sup>rd</sup> or 4<sup>th</sup> year medical student, rotation requirements will vary, but may average 50 – 60 hours weekly or more. Residency is a whole different ballgame. The stakes are higher, the coats are longer, and usually the time commitment is greater. There is often little opportunity and time to reflect on personal goals in areas outside of medicine. The significant time commitment that is required for medical school and residency training can be stressful. Unless you learn to manage this stress through productive activity (sports, reading, family activities, interesting hobbies, etc.), habits such as alcohol or drug use may develop.

Neil Young once wrote "It's better to burn out than to rust", and that is the creed in many medical schools. We are intense in our pursuit of perfection and high achievement, but this comes at a cost. Some of us learn that a way to cope with the pressure is with the use of alcohol and drugs. Although subtle, it is all around us. The post-exam party, the medical school fraternity celebrations, and even school-sponsored events encourage the use of alcohol. This has been less common today than in past years, but still remains pervasive. Over the last decade, there has been increasing awareness of the wellness of health care professionals, including the development of state sponsored programs for the "Impaired Physician."

## WHAT IS THE DEFINITION OF AN IMPAIRED PHYSICIAN?

Most of us have ideas of someone who constantly drinks, shows up to work intoxicated, or drinks heavily at home with obvious consequences. This may not

be the case. What about the physician or student who shows up for hospital rounds smelling of alcohol from the prior night's drinking, or the one who gets arrested for a DWI violation, or the clinician or provider who has insomnia (shift work), and starts to take medications such as *ambien* or *halcion* to help fall asleep at night? The list can go on and on. Substance abuse many times will not initially be noted in the work performance environment because this is where people are most comfortable. When it does, telltale signs may have already been present. This often begins through subtle signs such as frequent tardiness or ill preparation for tasks, duties, exams and responsibilities. The first manifestation may be a recent change in behavior, unexpected borrowing of money, unkempt clothing or poor hygiene.

There have been very few publications about alcohol and drug use in the medical school environment, but one such study in JAMA 1998 followed a medical school class from 1<sup>st</sup> through 4<sup>th</sup> year with questionnaires about their alcohol use.<sup>1</sup> A surprising number of students (15%) reported heavy alcohol use and a high number 25% of alcohol abuse. These numbers declined as they approached the clinical years, but no one reported that their drinking affected their performance in school or at home. This included those that reported drinking large quantities on a daily basis. This brings about what many in the field of addiction site as the difficulty in treating the impaired physician, a tremendous denial system that is difficult to penetrate. Medical training instills self-reliance and does not allow our egos to accept weakness, or what is perceived as weakness. By the nature of who we are, our strengths become our weakness and the medical culture discourages peer reporting.

#### ARE MEDICAL PROFESSIONALS AT A HIGHER RISK FOR DRUG AND ALCOHOL PROBLEMS THAN THE GENERAL PUBLIC?

Many have raised this question. The answer is unclear and viewpoints differ widely. Some cite that they are equal and approximately 10%. The people who specialize in treating alcohol and drug problems in physicians contend that it is higher in physicians and approaches 15%.<sup>2</sup> Dr. G. Douglas Talbott, past president of the American Society of Addiction Medicine, has held that there is a greater problem in the medical field, but due to entrenched systems that enable physicians, it is difficult to get these people the help they need. This is changing over the last decade with the education of state medical societies. These policy changes have focused on treating the impaired physician instead of instilling punitive measures.

Are medical professionals more at risk to begin with? In looking at the medical student population, a high number of those with excessive drug and alcohol issues come from families with alcohol or drug problems. Therefore, with this family history and a general acceptance of the inherited disease model, such

clinicians seem to be at risk for problems from the start.

#### WHAT ABOUT THE DIFFERENCES BASED ON SPECIALTY?

Does the high stress and intense pace of emergency medicine (EM) lead to high rates of alcohol and drug abuse? Again, there are very few publications that look at this, and the best data are from the addiction specialists who treat physicians. Looking at numbers from facilities in Atlanta and Chicago, the highest rates were among general practice/family practice and also anesthesia.<sup>3</sup> EM was not defined as a category; therefore EM residents and emergency physicians (EPs) were not included. It is well known that anesthesiologists have a high incidence of drug abuse, mostly narcotics and specifically *fentanyl*/addiction. The rationale behind the numbers seen in family practice is not fully understood. Note also that many of the members of the higher risk category (family practice physicians or general practitioners) could have been practicing in emergency departments (EDs) where shortage had persisted for qualified EM boarded and trained physicians. One could even postulate that inadequate EM training could contribute to increased considerable stress to these practitioners and a higher addiction risk. EM-specific studies are therefore needed to secure reliably representative data about the specialty.

There are several avenues to getting help for abuse problems. The Office of the Dean has access to programs on campuses that are available to medical students. While in residency and later in private practice, the Office of Graduate Medical Education (GME) and the state medical societies can respectively offer help.

#### SO WHAT HAPPENS TO A MEDICAL STUDENT OR RESIDENT WHO IS THOUGHT TO HAVE A SUBSTANCE ABUSE PROBLEM?

Once identified as having such a problem, either the Dean of the medical school or the program director will refer an individual to be evaluated by an addiction specialist. These are usually physicians that have experience in treating health care professionals. Then, if deemed to have a problem, there are several treatment facilities around the country that specialize in treating physicians. It has been shown in multiple publications that the most successful approach is a 3-4 months program that has participants interacting and living with other physicians that can share like experiences.<sup>4,5</sup> This point is when the state "impaired physicians programs" become involved. A 5-year contract is generally signed with attendance at after-care programs, random urine screens, and community Alcoholic Anonymous (AA) meetings as a standard in order to return to work. Contrary to popular belief, most physicians report easy transition back to work or school with considerable support from colleagues and administration. The support of program directors and employers is paramount

along with community AA and family.

Most state "impaired physicians programs" act as a buffer between the MD or student and the state board. One advantage that the medical student has in early intervention is they are not licensed and the state boards do not come in to play yet. In states with more progressive programs, a physician is not reported to the board unless he or she fails to cooperate and follow the recommendations of treating MDs, or there are serious legal problems or chronic relapses.

### ARE CLINICIANS REQUIRED TO SUBMIT URINE DRUG SCREENS IF ASKED?

Yes, the department of transportation (DOT) has federal guidelines along with state and local policies that are in place to protect the public, and in the long run help the physician. Refusal to submit a drug screen could lead to termination, or at best, to a referral for evaluation of a presumed positive drug screen.

### SO, ARE WE OBLIGATED TO REPORT A COLLEAGUE THAT WE THINK IS IMPAIRED, AND IF SO, HOW SHOULD WE GO ABOUT IT?

In the past it was very difficult for physicians to "break rank" and report one of their own. This remains a sensitive subject. As physicians we take an oath to protect life, and this includes our patients and colleagues. If a physician is obviously intoxicated, one should pull them aside and suggest that they leave work or school and defuse the immediate crisis. The next step will have varying opinions, but this author believes that you should talk to the person and advise them to self-report to their Dean or program director. If the impaired clinician does not self-report, their colleague is obligated to do so. The best case scenario to start with is self-reporting, but due to the denial and fear this is not always the case.

### IS IT MALPRACTICE AND IS IT COVERED BY OUR MEDICAL LIABILITY INSURANCE?

Questions have arisen regarding malpractice coverage if we cause harm to a patient while actively impaired. Several legal experts in this field state that generally if you were impaired while seeing a patient and this impairment was of your choice, then this would constitute an "intentional act" and would not be covered by malpractice insurance plans.<sup>6</sup> Most malpractice contracts state that they will not cover intentional acts. This would leave you personally liable and at great risk for financial ruin.

## SO HOW DO WE AVOID DEVELOPING THE PROBLEM TO BEGIN WITH?

Like any other area in medicine, education about prevention is critical. This should start in the medical student curriculum with emphasis on problems in health care workers. Focusing solely on patients excludes the insight that is critical for essential introspection into the patterns of addiction. The goal is to learn to find a balance in our lives between work, play and family. We are in a very honorable profession and are given the opportunity to touch many lives with kindness and caring. Unfortunately, we often forget to be kind to ourselves. After all, maybe it is better to rust than to burn out.

### References:

1. Mangus RS, Hawkins CE, Miller MJ. Tobacco and alcohol use among 1996 medical school graduates. *JAMA*. 1998;280:1192-3.
2. Interview with G. Douglas Talbott, the founder of Talbott Recovery Center, Past President of the American College of Addiction Medicine.
3. Skipper GE. Treating the chemically dependent health professional. *J Addict Dis*. 1997;16:67-73.
4. Geyser MR. The impaired physician: The Arizona experience. *Fed Bull*. 1988;75:77-80.
5. Reid WH. Recognizing and dealing with impaired clinicians: Part II—treatment options. *J Med Pract Manage*. 2001;17:145-8.
6. Interview with Larry Weiss, MD, JD, (Director of Faculty Development and Academic Services for the LSUHSC EM Residency) and Jorge Martinez, MD, JD, (Medical Director, Director of Emergency Services, Program Director of the Combined EM/IM Residency, Charity Hospital, New Orleans, Louisiana) legal experts in the area of medical malpractice.





## 43

International Emergency  
Medicine: An Overview

## RESIDENT AUTHOR:

Janna Welch, MD (University of Virginia /Louisiana State University, New Orleans)

## FACULTY AUTHOR:

Philip Shayne, MD, FACEP (Emory University)

## FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

## INTRODUCTION

Emergency Medicine (EM) has always attracted physicians with diverse interests. It is an exciting career for those who love intensity in the workplace and flexibility to pursue outside interests. The recent development of opportunities in international emergency medicine (IEM) allows the emergency physician (EP) to combine passions for occupation and travel. An increasing number of EM applicants are gearing their career goals toward international work. Emergency physicians (EPs) are well prepared to provide a broad range of skills to underserved areas and to crisis situations. And while disaster response and management remains a priority, IEM has evolved from crisis intervention to include the creation and support of nascent emergency care infrastructure and training programs in developing countries. This chapter will outline the opportunities available to EPs and suggest alternative career paths in IEM for interested students and readers.

## HISTORY

Being the last primary specialty to be established in the USA, EM is still new relative to the other disciplines. The first training program in the USA began in 1970. The American Board of Medical Specialties (ABMS) and the American Medical Association (AMA) recognized EM as the 23<sup>rd</sup> medical specialty in 1979. Today there are nearly 157 allopathic and osteopathic training programs in the USA. Internationally, two different systems have developed for the delivery of emergency medical care. One is the Anglo-American model that we are familiar with in the United States; the other is the Franco-German model.<sup>1</sup> However, in most countries, even those with an advanced system for delivering emergency medical care, EM is still not a recognized specialty.

## THE FRANCO-GERMAN MODEL

In the Franco-German model, emergency care is brought to the patient.<sup>1</sup> Emergency systems are used to provide out-of-hospital urgent care and to

screen which patients need to be transferred. The physician and technology are sent to the scene in the hope of providing an immediate high level of care when most needed. Physicians ride in ambulances and provide a tiered response, responding to incidents that paramedics deem more critical. Resuscitation, triage decisions, and treatment are provided on-scene, and fewer patients are transported. Transported patients are often directed straight to in-patient services. Thus, EM is practiced almost exclusively in the field. Emergency care consists mainly of resuscitation and pain control.

The physical space North American EPs refer to as an "emergency department", "ED" or "ER," tends to be more limited in size, supplies, equipment and staffing than in the U.S. or Canada. The EDs generally deal only with walk-in traffic, as patients brought in by pre-hospital personnel go directly to in-services. Crowding and patients waiting for beds is usually not an issue. Anesthesiologists do much of the resuscitative care.

This system has been noted for several problems. The specialty is not well recognized and career prospects are limited in this system. The ED is usually staffed by general practitioners recently graduated from medical school or by retiring physicians. As such, the physicians are not well trained in emergency care or subject to the same supervision and quality assurance controls that one sees in North America. In this climate, physician turnover is high as they sooner or later go into other specialties. In pre-hospital care, paramedics often need to wait for a physician to arrive before resuscitation and life-saving procedures can be instituted. Laws restrict the right to defibrillate or to administer intravenous drugs even when such training has been provided to pre-hospital responders. Response times tend to be high. Data collection is also difficult. Countries following the Franco-German model include much of Europe and Northern Africa, including Russia, Egypt, Tunisia, the former Soviet republics and the Baltic States.

### THE ANGLO-AMERICAN MODEL

In the Anglo-American model familiar in the US paramedics provide pre-hospital care. Paramedic and Emergency Medical Technicians (EMTs) are physician extenders into the field who provide care, stabilize, and transport the patient. Patients are brought to EDs or diverted to specialty or trauma centers based upon type and severity of illness or injury. The ED serves as a medical care unit and is capable of providing care for all patients who present seeking care. Care in the ED is often definitive and not relegated to consulting services. The ED functions as a gatekeeper and as a central hub for stabilization, resuscitation diagnosis and mobilization of institutional resources.

In this model, EM exists as a specialty and is officially recognized. The level of care is improved by physicians who choose EM as a career, train in it as a

specialty, and strive to improve its body of knowledge. The specialty can sustain organizations that promote research, continuing education, and practice guidelines specific to emergency care. This system is utilized in the English-speaking countries of the USA, Canada, the UK, and Australia, as well as in many non-English-speaking Asian nations.

### INTERNATIONAL TRENDS IN DEVELOPING EMERGENCY CARE SYSTEMS

In much of the developing world, mature and integrated systems for the delivery of emergency care do not exist. In a 1999 paper in the *Annals of Emergency Medicine*, Jeffrey Arnold, MD, categorized the stages the maturation in developing emergency medical systems.<sup>1</sup> Most countries follow a similar sequence of progress: forming a core group of interested physicians, organization of a specialty society and starting residency-training programs. Systems and structures for delivering emergency medical care were described as underdeveloped, developing, and mature. In countries that are currently developing emergency systems, most imitate the Anglo-American model and residency training is generally in its infancy.

In the underdeveloped emergency care system, EM is not recognized as a specialty and formal structures do not exist. EDs, where they do exist, are not staffed by specially-trained physicians. Though ambulance services may exist, there is no organized pre-hospital system and patients arrive to the ED by any number of uncoordinated means. There is rarely uniformity in types of service from one city to the next, or even from hospital to hospital.

In a developing emergency care system, a core group has undertaken the job of organizing the system. EM is recognized as a specialty requiring specialized practitioners. National societies often exist, and training programs are being developed. Guidelines are developed to standardize care. Most ED care is still provided by physicians who are not specialized or adequately trained for EM practice. Emergency medical services (EMS) often exist and most patients are brought by basic life support services. Some advanced EMS training may be in place. Numerous countries have been described at this stage.

In a mature emergency care system, the scope of EM has expanded. Most ED care is provided by specially-trained physicians. There is a developed academic or professional organization that can advance the field. The field can now sustain fellowships and sub-specialization, national databases and peer-reviewed journals. EMS systems are developed and run on city, regional, and even national levels. Management systems are now in place for process improvement, quality assurance and cost controls. Countries that can be described as having matured emergency care systems include Australia, Canada, the United Kingdom, and the United States.

To give you an idea of the variety of systems and levels of development, let us look at a few different countries and their utilization of emergency systems.

### South Korea

South Korea is an economically prosperous country and as a result has been able to develop an emergency care system relatively rapidly.<sup>2</sup> South Korea recognized the need for good emergency care as it moved from an agrarian economy to an urban and highly industrialized one. Rapid urbanization meant more people in the cities and more automobiles with little time to develop an organized highway system. This meant rapid increase in motor-vehicle accidents and many fatalities. The Korean government recognized that organized emergency response can be highly effective in more concentrated urban areas. Residency training in EM began there in 1989, and there are now more than 30 programs. Board certification and recognition of the specialty became official in 1996.

In the 1980s, unsupervised junior residents from many specialties commonly staffed Korean EDs. Now most residents practice under trained supervision. No predetermined criteria exist for trauma team activation. No formal certification or education in Advanced Trauma Life Support (ATLS) or in any other forms of trauma training is required for trauma participation. Stroke teams do not exist. Firemen with training that is equivalent to Basic Life Support staff ambulances.

### Costa Rica

Despite the fact that Costa Rica historically has one of the most stable democracies in Latin America, it was without an emergency care system until very recently.<sup>3</sup> In 1985, a training program for EMS was organized by Project HOPE and trained over 11,000 people. This greatly improved the condition of trauma victims on presentation to the ED, but did not guarantee competent medical care at the hospital. In 1993-1994, the University of Pittsburgh and Project HOPE initiated training program for physicians with at least 5 years of ED experience. This was a physician-exchange "train-the-trainers" approach to provide faculty for a future EM residency program. Twenty-one faculty were trained by American EPs to staff each ED as a leader both in the department and in the field nationally. The system has worked well, and Costa Rica now has an EM residency, which graduated 12 new EPs in the first 2 years.

## ROLES OF EMERGENCY PHYSICIANS IN THE DEVELOPING WORLD

These are two examples of the work that can be done globally in emergency care. American EPs can play an integral role. This is the "systems" approach to working in IEM. EM specialists help foreign training institutions to build programs in that area of expertise. This is the direction that much of IEM is

taking. Systems planning, pre-hospital care and paramedic training, ED organization and staffing, and residency curriculum development in the developing world benefit from the expertise of trained EPs to achieve their goals.<sup>4</sup> Organizations currently working in this area include Emergency International (EI), the Society of Academic Emergency Medicine (SAEM), the American Academy of Emergency Medicine (AAEM), the American College of Emergency Physicians (ACEP), the International Federation for Emergency Medicine (IFEM), the European Society for Emergency Medicine (EuSEM), the Center for International Emergency Management Systems (PECEMMS, Netherlands), the World Association for Disaster and EM (WADEM), and the Asian Society for Emergency Medicine (ASEM).

EI ([www.emgint.org](http://www.emgint.org)) is a non-profit group that trains EPs, nurses, and pre-hospital providers, supports conferences, promotes physician exchange, and collaborates on research in emergency services development worldwide. It was founded in 1989 to promote emergency services in the Soviet Union.

The SAEM International Interest Group is currently developing a framework for IEM training, and has published guidelines for observational fellowships.<sup>5</sup>

The AAEM International Committee has developed a biennial landmark Mediterranean EM Congress in cooperation with the EuSEM. It has also established an international honorary membership for leaders of national EM organizations, an international membership with a reduced fee, and an annual "International EM Leadership Award." This award recognizes leaders who played a major role in developing the specialty and the field of EM internationally. The "honorary AAEM international membership" provides any international EM organization through their President with an official and permanent link and liaison to AAEM and its resources, with all the AAEM publications (including *Common Sense* and the *Journal of Emergency Medicine*) and with free attendance to the AAEM Annual Scientific Assembly.

ACEP fosters the development of IEM through its IEM taskforce, its role developing and promoting the IFEM, its dedication of a section in the *Annals of Emergency Medicine* for EM international reports, and through the activity of its largest membership section. The ACEP International Section wishes to help support the formal recognition of the specialty and its national societies abroad through the co-organization of international meetings and a periodic section newsletter. The IFEM is a multinational federation of national organizations that promotes the development of EM and sponsors the biennial International Conference on EM (ICEM). Membership in the Federation is restricted to organizations, which meet specific criteria, which have been adopted by its Canadian, Australasian, US, and British original founders.

Founded in 1993, the EuSEM ([www.diesis.com/eusem/](http://www.diesis.com/eusem/)) has been promoting EM across Europe. It has established biennial scientific meetings, an outstanding medical journal (the *European Journal of Emergency Medicine*), and a landmark "Manifesto" that has been serving as a framework for national European societies that are working to advance the field of EM, in terms of delivery systems, science and training, under the basic premise of an independent primary specialty.

Recently expanding to include a US chapter, the PECEMMS was established in the Netherlands to provide information on emergency care to Eastern European nations.

The WADEM was one of the first international organizations to promote EM and systems for proper delivery of emergency medical care and disaster management ([www.wadem.medicine.wisc.edu](http://www.wadem.medicine.wisc.edu)). It sponsors periodic international Congresses and provides opportunity for networking and exchange.

Last but not least, established in 1998, the ASEM ([www.asem.org.sg](http://www.asem.org.sg)) promotes EM training, science and education as well as regional guidelines in emergency medical care in Asia and has begun organizing regular conferences and activities.

Many other international organizations exist, in particular, at the level of individual countries and regions. Those include societies and organizations with a variety of objectives, scopes and stages of development such as the very well-established Canadian Association of Emergency Physicians (CAEP) and Australasian College for Emergency Medicine, the Society for EM in Singapore, the Hong Kong Society for EM, the Israeli Society for EM, the WADEM, the EM Association of Turkey and the burgeoning Arab Board of Emergency Medicine. It is beyond the scope of this chapter to include a description of all of them. However, a detailed and growing listing of all such organizations and their web sites is available to interested students, residents and EPs at [www.aaem.org](http://www.aaem.org) and [www.acep.org](http://www.acep.org) under "Links to other organizations."

## RELIEF WORK

Many American EPs provide international assistance through relief work. Relief work exists as an integral part of IEM. Many relief organizations specialize in delivering episodic emergency care to overseas populations in times of crisis (man-made or natural). However, it should be obvious to our readers by now that IEM is certainly not limited to relief and humanitarian activity. EPs perform clinical duties assigned in order to provide health care to those in need, or specialize in disaster control or military assistance. Historically, these areas are quite interrelated, as public health monitoring and education and epidemic control are highly important in refugee camps and areas of natural disaster.



## DISASTER MEDICINE

Disaster medicine is a very broad field for the EP. It involves coordinating response by assessing needs and damages in specific crisis situations as well as providing patient care. This can mean monitoring the epidemiology of infectious disease and the safety of drinking water after floods. It may involve teaching first aid or researching triage and treatment techniques appropriate for military casualties or earthquake victims. It can also involve coordination of planning among government agencies and relief organizations. There are numerous organizations involved in disaster management on both the domestic and international levels including the American Red Cross, Doctors Without Borders, AmeriCares and the International Medical Corps among others.

## SUBSPECIALIZATION

Many EPs do not plan to get involved specifically in IEM, but find their way into it via other areas of expertise. Subspecialization in hyperbaric medicine and sea rescue, wilderness care and high-altitude medicine provide opportunities for the most adventurous physicians to work overseas. Most of these areas are not specifically a domain restricted to EPs. However, if you have a passion for climbing, hiking, or diving, why not pursue a career that can provide you the opportunity to practice where your passion lies? For example, cardiologists and pulmonologists classically study the physiologic changes of acute mountain sickness (AMS). However, a physician who understands AMS and is also capable of treating broken limbs and sewing lacerations is likely to be of greater use on a K2 climb.

Wilderness medicine training is also familiar territory for EPs. We all learn in residency what to do for envenomation and any EP working in a poor urban setting knows what to do with hypothermia. Why not work in the Alaskan wilderness or the Amazon basin?

Hyperbaric oxygen therapy is currently used for a variety of problems, including burns and infection. However, it was developed for decompression sickness in scuba divers. With over 920 chambers worldwide, many of which are located in tropical areas where diving is more popular, clinical and research career opportunities abound for EPs interested in sea rescue and decompression sickness.

## PREPARATION AT HOME

An IEM career sounds incredibly exciting and has endless options. So, now you realize the opportunities you will have once you finish your training. The next big question is, as a US medical student, how do you reach those goals? An EM residency is required, but there are over 150 to choose from. What about fellowships? What can you do now, at the student level, to explore your op-



tions? There are a million questions to ask and certainly as many different ways to answer them, but here is a little advice.

## RESIDENCY

With over 150 EM residencies nationwide, how do you pick which one is right for you? This topic is covered in other chapters. However, should an interest in IEM affect your program choice? Certainly, it should. However, the rigorous training and large body of knowledge required of an EM residency leaves little time for specific teaching on international topics. It would also be difficult to choose which elements of international work to teach. So you are not going to look around and find a residency that specializes in this area. Luckily, there are many residency programs that have faculty members involved in overseas projects. When you start researching residency programs, get a list of faculty names and find out what kind of research they do. Go to the residency Website and check out the faculty areas of interest and publications. Ask your own advisor. Many of them know what programs to point you to. If they have interests or publications on international topics, you will find them without difficulty. You can even request extra time to talk to these people when you schedule your program interview.

If you hope to pursue international work during your residency, look at the amount of elective time provided in the program. This is usually very limited until the later years of the program, but there is some variation from one program to another. Four-year residency programs generally allow more flexibility in the curriculum. Be aware that elective time does not necessarily mean that the program will allow you to leave town. Some may have to withhold your resident salary during the course of an international elective. Find out what the specific opportunities for residents are, and then ask whether and how they are funded.

For those who can manage or afford to travel during residency, there are numerous opportunities to develop contacts while at home. AAEM, ACEP, SAEM, and EI all welcome resident participation in project development. Other opportunities in international and disaster medicine are available through the Centers for Disease Control and Prevention (CDC), your local Disaster Medical Assistance Teams (DMAT) and the Federal Emergency Management Agency (FEMA).

## FELLOWSHIPS

IEM fellowships are a new development. Currently, there are four EM training programs offering fellowships devoted to international work (with a total of five positions). Both one- and two-year fellowships are available. Most offer the opportunity to practice or teach EM in an international setting. Some are

tied to a Masters in Public Health (MPH) program. Specific information is available on the SAEM web site at [www.saem.org](http://www.saem.org). The curriculum proposed by the SAEM for these fellowships is geared toward needs and resource assessment, program design, and implementation for emergency care systems abroad. EMS, disaster, and hyperbaric fellowships can also be useful for those interested in different aspects of work abroad.

A second form of programs that is referred to as an "international EM fellowship" provides international physicians the opportunity to learn and observe EM in a mature system. Such programs are typically observational, institutionally-sponsored, limited in duration, diverse in structure and content, and include the opportunities to shadow pre-hospital and ED personnel.

### MEDICAL STUDENT OPPORTUNITIES

The fourth year of medical school is a wonderful time to explore your interests in EM subspecialties. When else in your training do you have the time to work on a relief boat visiting tribes along Lake Volta or visit a traumatology hospital in Brazil? International electives are not necessarily easy to set up though, so make sure you have a back-up plan for another overseas elective or something interesting to do for credit at home if your plans fall through. It is also important to start planning well in advance, even a year ahead of time if possible. With good planning, you can find scholarships to fund your trip, study the language, and get your visa and required vaccinations taken care of before all your time gets eaten up by residency applications and interview season.

It is obviously easier to apply to work somewhere that has accepted foreign medical students in the past rather than forge a new path on your own, so look for opportunities supported by US institutions. Most programs are not geared specifically toward EM, but can still enhance your knowledge of the field. If you spend enough time in a one location overseas, you can do a little research on the type of emergency care that exists there even if you are not working in it directly.

There are also educational opportunities at home that will be useful for future international activity or practice. Wilderness medicine training programs are available in the Colorado Rockies through the National Outdoor Leadership School (NOLS). Your university may or may not approve this for credit, so check with your student affairs office. Many medical schools offer medical Spanish courses for those interested in brushing up on language skills before attempting to work abroad.

### INTERNATIONAL CONFERENCES

International conferences continue to play a central role in promoting exchange and providing considerable opportunity for networking in EM across the

globe. Such exchange is central to the international advancement of EM systems and of the field as a specialty. It is beyond the scope of this chapter to include all conferences and congresses related to EM. Many are dedicated to EM while others include or center around critical care, disaster medicine or trauma. We should, however, emphasize the importance of the EuSEM-AAEM Mediterranean EM Congress (MEC), the IFEM International Conference on EM (ICEM), the ASEM conferences and the European Society for EM Congress. These biennial conferences have a well-defined EM focus with research and didactic presentations and clearly promote training in the field through the establishment of a primary independent specialty. Students, residents and EPs interested in IEM should consider attending one or more of these events. Opportunities exist for them to submit their scholarly projects for presentation or to assist in the organization of such landmark EM events.

### MORE INFORMATION

As interest in IEM has flourished, more and more information is becoming available. Holliman et al published a listing of journals and Websites with significant IEM materials.<sup>5</sup> The *Annals of Emergency Medicine* and the *Academic Emergency Medicine* regularly feature papers describing international emergency care initiatives. There are a broad range of resources available for anyone with the desire to delve deeper.

As you can see, IEM is a field that is developing rapidly and serves many different interests. There are exciting opportunities both for you to learn and to provide medical care at every stage of your career. The most important thing to keep in mind is that your career is going to take the path that you create. The world is your oyster, so figure out what you want and go after it!

### References:

1. Arnold JL. International emergency medicine and the recent development of emergency medicine worldwide. *Ann Emerg Med.* 1999;33:97-103.
2. Arnold JL, Song HS, Chung JM. The recent development of emergency medicine in South Korea. *Ann Emerg Med.* 1998;32:730-735.
3. Keyes C, Rodriguez-Gomez G, Waller J. The Costa Rican emergency medicine residency: Design and implementation of a new specialty training program in Central America. *Ann Emerg Med.* 1999;34:790-795.
4. Keyes LE, Holliman CJ. Reference listing of international emergency medicine journals and web sites. *Ann Emerg Med.* 1999;34:786-789.
5. Holliman CJ, Green GB, Van Rooyen MJ, et al. Proposed curriculum for an "observational" international emergency medicine fellowship program. *Acad Emerg Med.* 2000;7:359-364.

## 44

Ethical Duties and  
Obligations in Emergency  
Medicine: An Overview

## RESIDENT AUTHOR:

Donald N. Janes Jr, MD, PhD (Loma Linda University)

## FACULTY AUTHOR:

Gregory L. Larkin, MD, MSPH, MS, FACEP (The University of Texas, Southwestern Medical Center at Dallas)

## FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

## INTRODUCTION

The practice of emergency medicine (EM) is fraught with numerous ethical pitfalls and moral dilemmas, and nowhere are those challenges more acute than in a busy emergency department (ED). While there are lofty *Principles of Medical Ethics* and even *Codes of Ethics for Emergency Medicine* already published in the EM literature, aspirational ideals provide little concrete direction and guidance in helping trainees capture the full spectrum of professional norms and expectations that they must embrace on the very first day of training.<sup>1-3</sup> Explicit definitions of both expected and unacceptable behaviors better guide us in terms that all can understand. Once boundaries are proactively defined at the very outset of training, professional ethics may be further illuminated and reinforced across the academic journey by formative modeling and mentoring activities. This refines the moral compass, buttresses commitment to professional goals, and provides a proactive optimal response to the ethical and moral needs of individual learners in emergency medicine.

Professional ethics, like common sense, has always been a valued constituent in medicine; but it carries added significance today, in times of greater patient expectations, escalating legal and regulatory requirements, increased burdens of medical documentation, financial and reimbursement issues, and increased time pressures.<sup>4-7</sup> These strains on the modern physician and their charges are amplified in the hectic public fishbowl of an ED, thus making an understanding of professional ethics essential to the successful and ethical practice of EM in the 21<sup>st</sup> century.

***Primum, Non Nocere* & Other Ethical Principles**

Traditional notions of Western medical ethics have focused on four major principles: *respect for patient autonomy*; *beneficence* (doing “good”); *nonmaleficence* (avoiding harm); and *justice*. In the broad clinical milieu of EM, all four are extremely important, and all four present great challenges to Emergency Physicians (EPs).

Respecting patient's autonomous choice, confidentiality, advance directives, and desires while simultaneously striving for beneficence may seem like obviously desirable, simple goals, but ED patients are often vulnerable, anxious, psychotic, intoxicated, violent, angry, confused, unconscious, or otherwise lack the decision-making capacity or ability to advocate for themselves. Also, the walking wounded and many other non-acute ED patients seek emergency care due to a lack of insurance or barriers to health care access elsewhere, and thus present additional challenges to the ethical EP striving to "do good".

At both the micro (patient-doctor) and the macro level, the principle of justice is critical to EPs. Indeed, it is the unique charge of EM to mobilize consultants, steward resources, interface with police, media and Emergency Medical Services (EMS), and transfer, transport, and triage patients, in EDs as well as in the middle of mass casualties and disasters. This demands a thorough understanding of the principles of utility and distributive justice.

Lastly and perhaps most importantly, it is ultimately in keeping anonymous patients safe from life- and limb-threatening emergencies that clinical EM fulfills its most vital societal role. Nonmaleficence is the bare minimum required, thus placing the Latin version of this sage principle, *primum non nocere*, (literally, "First, no harm") at the heart and center of an ethical emergency medical practice.

## BEYOND THE FOUR PRINCIPLES OF MEDICAL ETHICS

There are non-clinical issues, however, for which the ordering principle of nonmaleficence (and the four-principle approach in general) does not apply. Well-rounded and ethical EPs must strive for excellence in academic, clinical, administrative, and civic duties beyond the bedside. A humble obeisance to virtue and professionalism is even more important than an allegiance to the four principles of medical ethics.

*Professionalism* is a term that embodies numerous qualities of physicians as servants to their art, their patients, and to their colleagues and public. Professionalism has been described by the American Board of Internal Medicine (ABIM) as "constituting those attitudes and behaviors that serve to maintain patient interest above physician self-interest."<sup>8</sup> Professionalism has also been described as "a structurally stabilizing, morally protective force in society."<sup>9</sup> All professions are recognized as consisting of three essential characteristics: expert knowledge, self-regulation, and a fiduciary responsibility to place the needs of the client ahead of the self-interest of the practitioner.<sup>10</sup> The concept of *Medical Professionalism* includes such values as honesty, altruism, service, commitment, suspension of self-interest, commitment to excellence, communication, authority, and accountability.<sup>4,11-18</sup> Students and residents may benefit from both novel and standardized curricula, formal educational mate-

rials, and evaluation instruments for promoting professionalism in undergraduate medical education and beyond.<sup>19-25</sup>

### PROFESSIONALISM: A CENTRAL AND TRANSCENDENT DUTY

Recently dubbed a "*core competency*" requirement by the Accreditation Council for Graduate Medical Education (ACGME), *professionalism* is now considered a mandatory component of both undergraduate and graduate medical training. Beginning in July 2002, training programs are being held accountable for new requirements related to the six core competencies, including:

1. Patient Care
  2. Medical Knowledge
  3. Professionalism
  4. Systems-based Practice
  5. Practice-based Learning and Improvement
  6. Interpersonal and Communication Skills
- (For additional details, see: [www.acgme.org/req](http://www.acgme.org/req))

However simple an idea, professionalism has heretofore remained elusive, an unearthly construct handed down from *Olympus* without a user's manual, textbook, or roadmap. Operational virtues, codes of conduct, and transparent definitions of expected and unacceptable behaviors are needed to illustrate the practical application of professionalism in terms that all learners and evaluators can understand.

### Fostering the Cardinal Virtues of Emergency Medicine

*Our character is what we do when no one is looking.....*<sup>H. Jackson Browne</sup>

Assessments of ethics and professionalism are often conducted retrospectively by aggrieved families, risk managers and attorneys.<sup>26</sup> In order to apply the principles of forward thinking and proactivity to professional development, there is an immediate need to be more explicit in defining what is clearly in or out of bounds. A pre-emptive fostering of professional virtue and eradication of vice is a preventive strategy that may keep emergency medical ethics at the forefront during training and beyond.

Virtue-driven aspirations, ideals, and relative goals provide a road map to good professional medical practice. However, to be relied upon, they must be developed with practice, repetition, and encouragement. Virtue promotion may be thought of as a kind of moral vaccination against the ethical pitfalls inherent in emergency medical practice. Important examples of professional virtues include *prudence, non-judgment, self-effacement, compassion, trustworthiness, resilience, communication, friendliness, humility, intelligence, vigilance, and tact*, just to name a few.

Resisting vice is also important, and has received little attention in medical education to date. Many of the original “*seven deadly sins*” of antiquity still apply: *avarice*, *pride*, *sloth*, and *lust* have no place in professional medical practice. To this list one might well add *apathy*, *disrespect*, *recklessness*, *insensitivity*, and *dishonesty*. Nurturing virtue and resisting vice is one way to develop useful and skilled physicians that measurably improve the quality of care for emergency patients, enrich the environment and relationships in which they work, and bring honor and integrity to the forefront of the healing arts.

While optimizing the proportion of virtue over vice in EM is laudable, we must ensure that professionalism is an intelligible element that is integrated into every-day medical education and practice. Even as the ACGME counsels that the ideal professional should “demonstrate compassion” in his or her interactions with staff, patients and families, this notion is a vague and intangible objective that is nearly impossible to achieve or quantify, even though we readily notice when it is missing. To better implement professionalism, high-minded ethical principles such as *nonmaleficence* and Aristotelian virtues such as *temperance* must give way to more concrete notions of professionalism: *punctuality*, *accurate charting*, *grooming*, *truth-telling*, *not signing out unstable patients*, and *sexual abstinence* in the workplace, to name but a few. It is in these straightforward examples of actual behaviors, and not merely through lofty underlying aspirations, that an authentic conception of *professionalism* comes to life.

## FINDING GENUINE “RULES OF THE ROAD” IN PROFESSIONAL EDUCATION

Until recently, behavioral norms and standards of professional conduct were absent from most medical curricula. Most educators were taking these guidelines completely for granted. However, all Graduate Medical Education (GME) programs have always expected their interns and residents to follow these norms since the outset of training, and to behave in ways that are becoming to both the program and the profession for years to come. Learning objectives and outcome measures for professionalism must be explicit, as they are for cognitive and procedural skills.<sup>27</sup> Moreover, as part of both contingency planning and continuous quality improvement, remediation strategies for lapses in professionalism should also be planned *a priori*. In order to avoid later misunderstandings, remediation, or litigation, unacceptable behaviors and their paired consequences should be clearly articulated and transparent to residents from the very beginning of residency, so that there can be no doubt as to the grounds for advancement, remediation or dismissal. Otherwise, it would be inconsistent and unfair to expect resident compliance with rules and regulations that



have not been written, defined or communicated.

Early and consistent exposure to the rules of professionalism will also serve to orient the young resident toward the importance of integrity, honesty, and trustworthiness throughout residency and beyond. Although adding specific performance criteria to the curricular demands of a program may seem tedious, it is a onetime fixed cost that may avoid later misunderstandings and expenditures on remediation, counseling or litigation.<sup>28</sup>

### PROFESSIONALISM: A FRAMEWORK FOR SELF-EVALUATION & REMEDIATION

"Without basic codes of conduct and decency,  
organized medicine could not exist."

As in Dante's *Divine Comedy* with its circles of *Paradiso* and *Inferno*, there are tiers of professional and unprofessional behavior that are more or less virtuous or vicious, respectively. One simple four-tiered scheme of behavioral professionalism includes two levels of professionally "good" behaviors, and two levels of unprofessional or "bad" behaviors (Table 1). Within these four strata it may be relatively easy to distinguish more virtuous or exemplary behaviors from those activities and actions that are merely expected or basic to professional practice. Similarly, simple venial mistakes or lapses in professionalism may be distinguished from those egregiously unprofessional behaviors that warrant serious remediation or dismissal.

Each of the items of the four groupings or categories may be assigned a value or score within that category. These can be summed and weighted and used in semi-annual assessments of performance. Such an evaluation can promote a forum for discussion of more formative professional evaluation as well as a platform upon which discussions of remediation may be predicated. Unbiased and formative evaluations may include descriptive benchmarks and feedback from both patients and ancillary staff, which can be very effective in assessing less technical aspects of medical training.<sup>29</sup> Due to the important influence of faculty and mentors, residents and students must take seriously their obligation to evaluate their teachers and fellow learners as part of the faculty and resident development process.



**Table 1: Virtues & Vices in Professional Practice**  
 The Four Valences of Professional Behavior:  
 Ideal (+2), Desired (+1), Unacceptable (-1), and Egregious (-2)

**PROFESSIONAL:**

- Aspirational/Ideal Behaviors (+2)
  - Generous and forgiving toward co-workers, consultants, patients, and families
  - Altruism and unconditional positive regard toward others
  - Resiliently positive attitude and good humor
  - Generate goodwill and positive attitude in others
  - Humility regarding own achievements
  - Nurturing of learners and solicitous of questions
  - Charity toward patients, staff, consultants
  - Consistently goes beyond the call of duty
  - Defuse volatile and anxious patients and staff
  - Exemplary role model inside and outside the workplace
  - Does the right thing for morally praiseworthy reasons
  - Brings honor and respect to the profession
- Desired/Expected Behaviors (+1)
  - Arrive on time and prepared for work
  - Act in the patient's interests
  - Complete medical records legibly, timely, and honestly
  - Complete care and disposition of patients before signing them out
  - Protect patient's interests, privacy, and confidentiality
  - Treat patients/family/staff/paraprofessional personnel with fairness and respect
  - Protect staff/family/patients
  - Abide by appropriate reporting statutes
  - Maintains skills and fund of knowledge through continuing education and lifelong learning efforts
  - Teach other team members: students, staff, residents
  - Discuss difficult issues (treatment options, end of life decisions, diagnoses) with compassion with patients/family/staff
  - Learn from mistakes and openly accept criticism from faculty and staff
  - Politely refuse gifts from industry representatives and patients
  - Treat research subjects, newly dead patients, cadavers, and laboratory animals with dignity, reverence, and respect

### UNPROFESSIONAL:

- Unacceptable Behaviors (-1)
  - Arrive late or unprepared for work
  - Inappropriate dress and poor grooming
  - Expose patient information recklessly and inappropriately
  - Argue with patients or their loved ones
  - Use of expletives or other offensive language or information
  - Accept extravagant gifts from sponsors/drug companies or patients
  - Perform non-emergent procedures without appropriate faculty permission or patient consent
  - Make passes at or date subordinate staff/students/patients
  - Discriminate among students or patients on the basis of age, race, gender, status, income, sexual orientation, or creed
  - Interact disrespectfully with patients/family/staff/media
  - Failure to appropriately attribute other's work when using it for education/research
  - Failure to execute or respond appropriately to faculty direction or instruction
- Egregious Behaviors (-2)
  - Abandon patients
  - Failure to show up for work
  - Refractory lying, cheating, stealing
  - Substance abuse/dependence
  - Failure to learn from past mistakes
  - View or disseminate pornography or other offensive material at workplace
  - Take risks that seriously threaten safety of patients and staff
  - Harass students/patients/staff/paramedics
  - Verbally or physically assault patients/family/staff
  - Falsify medical records or research data
  - Irreparably damages the trust of patients and the honor of the profession

### CONCLUSION

Professionalism is an old idea but a new core competency for all of medicine in general, and EM in particular. Integrating and inculcating this traditional value and skill into the ethical consciousness of contemporary EPs will require non-traditional means. These methods will involve greater student commitment if outcomes-based learning and the adoption of a greater professionalism is to be effective. We have argued that professionalism may be fostered in multiple

ways, including but not limited to explicit delineation of rules, and the promotion of virtue. Perhaps through innovative approaches such as these, the lives of our students and residents may be transformed. Joined with caring faculty role models, their performance will illuminate the academic and hospital landscape with the kind of grace under pressure and ethical character that can become emblematic of a renewed moral commitment, an inspiring patient-centeredness, and a transcendent professionalism in the halls of modern EM.

### Acknowledgments:

1. Mary Patricia McKay, MD
2. Some of this material has been submitted as an article that was scheduled for publication in the November 2002 Special Issue of *Academic Emergency Medicine* and in the Newsletter of the Council of EM Residency Directors

### References:

1. Principles of Medical Ethics. June 2001. The American Medical Association. <http://www.ama-assn.org/>
2. Larkin GL. A code of conduct for academic emergency medicine. *Acad Emerg Med.* 1999;6:45.
3. Larkin GL, Moskop J, Derse A, et al. Code of ethics for emergency physicians. *Ann Emerg Med.* 1997;30:365-72.
4. Kassirer JP. Managed care and the morality of the marketplace. *N Engl J Med.* 1995;333:50-2.
5. Feldman DS, Novack DH, Gracely E. Effects of managed care on physician-patient relationships, quality of care, and the ethical practice of medicine. *Arch Intern Med.* 1998;158:1626-32.
6. Emanuel EJ, Dubler NN. Preserving the physician-patient relationship in the era of managed care. *JAMA.* 1995;273:323-9.
7. Swick HM. Academic medicine must deal with the clash of business and professional values. *Acad Med.* 1998;73:751-37.
8. American Board of Internal Medicine. Project Professionalism. Philadelphia, PA. 1994.
9. Wynia MK, Latham SR, Kao AC, et al. Medical professionalism in society. *N Engl J Med.* 1999;341:1612-16.
10. Sullivan W. What is left of professionalism after managed care? Hastings Center Report. 1999;29:7-13.
11. Blumenthal D. The vital role of professionalism in health care reform. *Health Aff.* 1994;13:252-256.
12. Adams J, Schmidt T, Sanders A, et al. Professionalism in emergency medicine. *Acad Emerg Med.* 1998;5:12.
13. Lundberg GD. Countdown to millennium: Balancing the professionalism and business of medicine. *JAMA.* 1990;263:86-7.
14. Cruess RL, Cruess SR. Teaching medicine as a profession in the service of healing. *Acad Med.* 1997;72:941-52.
15. Cassel CK. The patient-physician covenant: An affirmation of Askelepios. *Ann Intern Med.* 1996;124:604-6.
16. Emanuel EJ, Emanuel LL. What is accountability in health care? *Ann Intern Med.* 1996;124:229-239.
17. Putman DA. Virtue and the practice of modern medicine. *J Med Philosophy.* 1988;13:433-43.

18. Finkel MA, Adams JA. Professionalism in emergency medicine. *Emerg Med Clin N Amer.* 1999;17:443-450.
19. Swick HM, Szenas P, Danoff D, et al. Teaching professionalism in undergraduate medical education. *JAMA.* 1999;282:830-832.
20. Ludmerer KM. Instilling professionalism in medical education. *JAMA.* 1999;282:881-2.
21. Wear D. On white coats and professional development: The formal and hidden curricula. *Ann Intern Med.* 1998;129:734-7.
22. Reynolds PP. Professionalism in residency. *Ann Intern Med.* 1991;91:91-2.
23. Reynolds PP. Reaffirming professionalism through the education community. *Ann Intern Med.* 1994;120:609-614.
24. Hensel WA, Dickey NW. Teaching professionalism: Passing the torch. *Acad Med.* 1998;73:865-870.
25. Relman AS. Education to defend professional values in the new corporate age. *Acad Med.* 1998;73:1229-33.
26. Larkin GL. Evaluating professionalism in emergency medicine: Clinical ethical competence. *Acad Emerg Med.* 1999;6:302-311.
27. Albert W. Commentary: Doctors are obliged to be honest with their patients. *BMJ.* 2001;322:1238-1239.
28. Larkin GL. The code of ethics for emergency medicine: Why it's important for our specialty. *ACEP News.* 1998;17:4-5.
29. Pangaro LN. Investing in descriptive evaluation: A vision for the future of assessment. *Med Teach.* 2000;22:478-481.



## 45

Mentorship in  
Emergency Medicine

## RESIDENT AUTHOR:

Rasha Hindiye, MSI (University of California, Irvine)

## FACULTY AUTHOR:

Gregory L. Larkin, MD, MSPH, MS, FACEP (The University of Texas, Southwestern Medical Center at Dallas)

## FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

## ROLE MODELING: PRACTICING WHAT WE PREACH

"One preaches well who lives well," said Sancho,  
"and that's all the divinity I can understand."

Miguel de Cervantes

Although teaching faculty carry a tremendous responsibility to guide resident and student charges on related matters of ethics, professionalism, interpersonal skills, and multicultural competency, the ultimate responsibility for these behaviors resides with the individual. House staff may be required to learn new skills to be able to effectively learn in an outcomes-based, behavioral paradigm, since issues related to professionalism cannot be effectively absorbed in the classroom alone. These types of moral and ethical dilemmas must be addressed "real-time" by models and mentors in the clinical, academic, research, and administrative settings.

Inside or outside of the hospital, actions have always spoken louder than words, and thus modeling is a very powerful way residents impart to each other the importance of professional behavior. The actions of our opinion leaders, chief residents, and teaching faculty are certainly more instructive to students learning humanistic skills than all the books and learned journals of an entire medical library.

Modeling one's self is an ancient behavior, much like the imprinting practiced by lower animals, birds, and primates of all kinds upon their birth.<sup>1</sup> Long ago, the psychologist Carl Jung proposed the value of archetypal models as symbols for both aspiration and inspiration among humans of all types. Both history and literature give us examples of sinners and saints, heroes and villains in medicine. Medical centers and universities today house similar examples for our learning how and how not to behave. Modeling in medical education is a vital but

poorly articulated component of professional development.<sup>2</sup> Historically neglected by academic institutions, such instruction seemed relegated instead to the producers of "M\*A\*S\*H\*," "Medical Center," "Marcus Welby, MD," "Dr. Kildare," and other nostalgic television programs.

Finding a Hawkeye Pierce in a young specialty such as Emergency Medicine (EM) today is perhaps more difficult than finding an animated doctor Doug Ross (George Clooney) from televisions' *ER*. Albert Schweitzer was not an Emergency Physician (EP) and neither was Galen, Saints Cosmas & Damian, Freud, Pasteur, Curie, Salk, or Osler. Academic EM must therefore create its own heroes. By recognizing humanistic excellence and nurturing the concept of model clinicians, EM can advance, keeping the requisite clinical virtues foremost in the minds of students and residents. The use of models of excellence in the clinical, research, academic, and administrative settings may help teachers be more successful at introducing archetypal values and virtues in their students and residents.

Similarly, ethical EM professionals must also learn from mistakes, misadventures and misbehaviors, both their own and those of others. Models of medical villainy are legion and may be used as a benchmark for ethical and professional failure, be they historical (e.g. Drs. Josef Mengele, Harold Shipman, and arguably, Jack Kevorkian) or fictional (e.g. Chaucer's physician, Drs. Frankenstein, Jekyll, and Chillingsworth, the last from Hawthorne's *Scarlet Letter*).<sup>3</sup> While we may not necessarily wish for students to idolize *ER*'s young Dr. Carter, for example, it is incumbent upon faculty and senior residents to provide exemplary behaviors that will model professionalism and lead to academically successful, technically competent, resiliently humanistic, and emotionally mature EP progeny.

An essential component of the effective teaching of ethics and professionalism in graduate medical education is the competence and preparation of the chief resident. Although many of these less technical areas of medicine are common sense and can be learned by experience, a more unified approach is warranted, to ensure uniformity of behavior and coherence of material within the program. Clear performance expectations should be stated. There are issues many believe can have several "appropriate" levels of behavior such as interactions with drug companies, dating between faculty, residents and staff, and financial issues.

Residency program faculty and senior residents must set a group standard for these behaviors and, more importantly, adhere to them, for students and junior residents cannot be expected to perform in a more professional manner than their superiors.

## MENTORSHIP: TEACHING PROFESSIONALISM &amp; BEYOND

In addition to using modeling to better learn about ethics and professionalism, the creation of adviser-advisee relationships holds tremendous potential for fostering professionalism and, when necessary, for remediation. The term *mentor* has Homeric origins, first appearing in Greek mythology as the name of the trusted friend who watched over Ulysses' son Telemachus, as the King himself went off to fight the Trojan War. The son of Alcimus, Mentor, was devoted to the tradition and greatness where Ulysses had come from. Indeed, were it not for him, the glory of the house of Ithaca would have been lost during Ulysses' long absence. So central was Mentor's role, that even the goddess Athena took his form when assisting Telemachus in his quest to find his father.

However mythical is its origin, the concept of mentorship has survived the millennia intact. The notion of mentorship has remained particularly compelling in professional circles, as the demand for mentors seems to keep them in short supply. With proper training and the legitimization of the mentor's role, new mentors can be groomed from the existing ranks of the faculty.<sup>4</sup> Program directors and assistant program directors may have a particular calling to mentor, but researchers, administrators, and other academics may also have a vocational commitment to lead, nurture and counsel residents and students. A seasoned mentor's potential role in helping young learners find their way cannot be overestimated.<sup>5</sup> Just as the parentless but popular fictional wizard Harry Potter needed the mentorship of both Rubeus Hagrid and Professor Dumbledore, so do all EM progeny need guidance and protection.

Mentorship may mean different things to different people, but the central role of guidance and protection remains. For some, this may mean finding a leader who can recognize their strengths and weaknesses, both inside and outside the hospital.<sup>6</sup> It is no secret that many new interns are undecided about their chosen specialty or path upon starting their program; a good mentor will therefore help them explore their fitness for their future job. This may involve an exploration of the virtues and vices of a candidate on several levels: physical, emotional, intellectual, and spiritual. A student, for example, who is decidedly a morning person with a keen sense of smell and is thereby deeply offended by nightshifts and malodorous feet, might be better suited for the laboratory or non-patient care activities rather than EM.

A mentor is also a vocational midwife or trainer who will help the student find themselves in the forest of EM, and through this coaching relationship, trainees may ultimately embrace professionalism through discernment of personal mission or calling. In academic medicine, that may mean a calling to research, education, clinical operations, or administration; however, in every case,



the mentor can help the student of EM find their place in the cosmos in a fulfilling and powerful way. According to the philosopher Lee Hardy, the spirit of self-discovery enlightens our quest for professionalism:

"... if work is a social place where our gifts are to be employed in the service of our neighbor, then two obligations follow: to discover and cultivate our gifts, and to locate the place where those gifts can be exercised for the good of the human community."<sup>7</sup>

When there is correspondence of calling and work, professionalism and purpose flow effortlessly.<sup>8</sup> By enabling residents to freely discern their gifts and design their life work to take advantage of those gifts, mentors help optimize the learners' chance for fulfillment in their profession.<sup>9</sup> This exploration may occur inside or outside the academic setting, but role boundaries must continue to be respected, even when exploring such issues as passions, hobbies, fears, and hopes.

Residents may also mentor each other. Keeping the lines of communication wide open including the use of e-mail, pagers, and even cell phones express a genuine and abiding concern to the student or junior resident. This ultimately helps to teach students that they too have duties of professionalism that extend beyond the hospital campus.<sup>10, 11</sup>

On a further note, resident or student remediation of unprofessional behavior should be done in the spirit of helping not punishing. Programs should have a uniform approach to residents who require remediation, including appropriate documentation of skills in professionalism and ethics, as well as other clinical areas. Deficiencies should be appropriately documented and addressed at regular intervals, which are typically no less than twice yearly. However, more frequent visits with the faculty mentor or advocate may be particularly more effective. In some cases, the utilization of outside evaluation and remediation, including psychiatry, social work, clergy, etc. may be indicated.

Residents must not hesitate to find a mentor. While many faculty view advising and mentoring as an extra-curricular non-teaching burden, most teachers see such an advisory role as an integral part of their vocation.<sup>12-14</sup> With the breadth of interpersonal and professional challenges as well as the number of off-service residents who are from foreign countries, faculty mentors and residents must be culturally competent as well as sensitive to the types of human tragedies that residents may suffer during training. Residents may also function as excellent mentors to their subordinates, but such resident mentors must also avert the ethical pitfalls of making defamatory comments or statements that harm a student or other learner's reputation. In addition, ethical mentors should be on guard against giving too much advice, as well as avoiding biases, harassment, and conflicts of interest. Ethically sound mentors are more

likely to produce ethical and morally sound professionals as well.<sup>15</sup>

There is a rich literature to the science of mentoring, with substantive evidence that developmental approaches that focus on potentialities and active learning are superior to prescriptive mandates with their focus on rules, prodding, and passivity.<sup>16,17</sup> Chickering and Gamson have shown that the most important factor in student motivation and involvement is the frequency of faculty-student interaction, both inside and outside the classroom.<sup>18</sup> Kramer, Tanner, and Peterson have emphasized the mutuality of the mentoring enterprise:

"Faculty should develop a caring attitude and personal regard for students. Long after the students have forgotten the information and advice faculty have given them, they will remember the gift of self."<sup>19</sup>

Mentoring engages students and residents in the conversation of what their life will be about, and focuses on their interests, skills, and life goals as professionals.<sup>20,21</sup> This approach has also been shown to enhance the mission of life-long learning by increasing the human capital and productivity of the participants.<sup>22</sup> Drew Appleby reflects on the value of the educational enterprise when mentors are involved by quoting Henry Cardinal Newman: "It (University training) shows us how to accommodate ourselves to others, how to throw ourselves in their state of mind, how to bring before them our own, how to influence them, how to come to an understanding with them, and how to bear with them."<sup>23,24</sup>

This consideration for others, we submit, is integral to professionalism, and is the prize of a well-mentored medical education. While being a mentor is not for everyone, many aspire to find humble, wise *Yodas* (*Luke Skywalker's mentor*) who may honor our own dreams and visions, bring out our best, and help us realize that, in spite of current odds, one person can still make a difference.

## S References:

1. Kohlberg L. The philosophy of moral development. San Francisco: Harper & Row; 1981.
2. Perry W. Forms of intellectual and ethical development in the college years. New York: Holt, Rinehart and Winston; 1970.
3. Hawthorne N. The scarlet letter. Boston: Ticknor, Reed & Fields; 1850.
4. O'Banion T. An academic advising model. National Academic Advising Assoc J. 1994;14:10-16.
5. Carneval AP, Gainer LI, Meltzer AS. Workplace basics: The skills employers want. Washington, DC: U. S. Department of Labor and the American Society for Training and Development; 1988.
6. Brewer CL. Curriculum. In McGovern TV, ed. Handbook for enhancing undergraduate education in psychology. Washington, DC: American Psychological Association; 1993:161-182.
7. Hardy L. The fabric of this world: Inquiries into calling, career choice, and the design of human work. Grand Rapids, MI: William B. Eerdmans.; 1990.
8. Holland JL. Making vocational choices. Englewood Cliffs, NJ: Prentice-Hall; 1985.
9. Frost SH. Fostering the critical thinking of college women through academic advising and faculty contact. J College Student Development. 1991;32:356-359.
10. Appleby DC. The microcomputer as an academic advising tool. Teaching of Psychology. 1989;16:156-159.
11. Eble KE. The craft of teaching: A guide to mastering the professor's art. San Francisco: Jossey-Bass; 1988.
12. Crookston BB. A developmental view of academic advising as teaching. J College Student Personnel. 1972;13:12-17.
13. Ryan CC. Advising as teaching. Nat Acad Advising Assoc J. 1992;12:4-8.
14. Kramer HC. Advising: Implications for faculty development. Nat Acad Advising Assoc J. 1983;3:25-31.
15. Perry W. Forms of intellectual and ethical development in the college years. New York: Holt, Rinehart and Winston; 1970.
16. Ware ME. Developing and improving advising: Challenges to prepare students for life. In McGovern TV, ed. Handbook for enhancing undergraduate education in psychology. Washington, DC: American Psychological Association; 1993:47-70.
17. Rooney M. Back to the future: Crookston and O'Banion revisited. Nat Acad Advising Assoc J. 1994;14:35-38.
18. Chickering A, Gamson Z. Seven principles for good practice in undergraduate education. AAHE Bull. 1987;39:3-7.
19. Kramer GL, Tanner JS, Peterson ED. Faculty mentoring: A key to first-year student success. In Upcraft M, Kramer G, eds. First-year academic advising: Patterns in the present, pathways to the future. Columbia, SC: National Center for the Freshmen Year Experience & Students in Transition; 1995:63-67.
20. Rosenstock L. The walls come down: The reunification of vocational and academic education. Phi Delta Kappan. 1991;72:434-436.
21. Appleby D. The teaching-advising connection: Part IV. The Mentor. April 9, 2001. (<http://www.psu.edu/dus/mentor/>)
22. Shaffer LS. A human capital approach to academic advising. Nat Acad Advising Assoc J. 1997;17:5-12.
23. Appleby D. The teaching-advising connection: Part V. The Mentor. April 30, 2001. (<http://www.psu.edu/dus/mentor/>)
24. Newman JH. The idea of a university. New York: Longmans Green; 1947/1852.

## 46

Political Controversy in  
Emergency Medicine:  
Introduction

## RESIDENT AUTHOR:

Joel M. Schofer, MD (Naval Medical Center, San Diego)

## FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

## INTRODUCTION

There will be some who will wonder why we chose to include a section in this guide on the topic of "Political Controversy in Emergency Medicine." Critics may indicate that any perceived negativity and schism in the field may turn off emergency medicine (EM) applicants who would have otherwise selected our specialty as a career, and done quite well in it. Predicting such a relevant concern, we chose to be proactive about this issue and to address this matter very openly.

It is our sincere belief that the inclusion of a section on controversy in the political and practice settings is a moral obligation that we owe to our students, applicants and peers. An informed applicant pool is more likely to enter the field better-prepared for the challenges of our career and to help us, the EM community, address, early on, these important internal issues more effectively in the decades to come. We also placed this overview of controversies at the end of the book, hoping that readers would go through it at the end, *after* acquiring the information that we believe will prepare them to continue embracing EM in an informed manner, and be better ready for what lies ahead.

There will be issues, basic and controversial, that critics will point out are missing from this section. This, of course, is not intentional, since we certainly did not shy away from difficult topics throughout the book. We believe that we minimized criticism of other organizations, focused on many of the positives, and chose to stay away from describing the majority of actions, inactions and shortcomings of EM organizations, including our own (American Academy of Emergency Medicine [AAEM]). We gave this section on controversy our best shot, minimizing bias, and conveying our personal perspective as authors and editors.

Of course, this section and its chapters do not reflect the official position of the AAEM or the opinion of all of its members. It is, however, the personal

perspective shared by many individuals who have served or continue to serve in a number of appointed or elected leadership positions in nearly all of the EM professional organizations. We ask, therefore, for your understanding if you believe any controversy was omitted, under- or over-emphasized. In addition, note that we ended this book with a section and chapter on "The Future of Emergency Medicine," one that emphasizes, with a positive tone, that EM is here to stay, to grow, and to serve most attentively our patients, specialists and communities. We hope that you will find these last two sections of this book to be a useful heart-to-heart resource that can inspire in our readers a better understanding of the difficult issues in our careers that we all need to face together.

## 47

Alternative Providers  
in the Workforce

## RESIDENT AUTHOR:

Jason May, MD (University of Indiana, Indianapolis)

## FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

## FACULTY EDITOR:

Tom Scaletta, MD, FAAEM (West Suburban Health Care, Illinois / Rush / Cook County Hospital, Chicago)

ED PHYSICIANS WITH ALTERNATIVE NON-EM TRAINING OR  
CERTIFICATION

Workforce studies published in the last 3 years have provided clear evidence that nearly half of the physicians working in the nation's Emergency Departments (EDs) are neither Emergency Medicine (EM) residency-trained nor EM board-certified by credible bodies.<sup>1, 2</sup> Despite a remarkable and continuing growth in the number of EM residents graduating every year, over 15,000 physician providers drifted into the EM workplace, covering ED shifts. Many have dedicated their career or a significant portion of it to emergency patients.

Often this happens because they can earn more dollars per hour worked in an ED than in the primary care specialties many of them had initially selected. Some end up practicing in the ED because they were forced or chose, for one reason or another, to interrupt their residency training in a myriad of specialties. Forced to make a living, unable to resume residency training, they accept ED positions offered by contract holders who often have no other alternative to staff their ED due to the shortage of EM board certified physicians. However, this is not always the case, since contract holders often use these providers to supplement their staffing with licensed physicians who are willing to work for lower hourly wages, cover odd and undesirable shifts such as weekends and holidays, in rural or unappealing locations.<sup>3</sup>

These alternative providers "learn as they go," how to manage cases they were not trained to deal with. They seek help through continuous medical education or the guidance of colleagues or consults, or through educational resources they have available during a shift. Sometimes, they succeed in mastering the knowledge and skill needed to deal with these cases. Sometimes they never do. One study identified that nearly half of them maintained a non-EM practice in 1997.<sup>2</sup> These non-EM residency trained physicians practice in our

EDs and constitute half of our workforce. Over time, they are forced to either leave EM for an alternative career, or to become a de facto life-time emergency medical practitioner, whether we like it or not.

American Board of Emergency Medicine (ABEM)- and American Osteopathic Board of Emergency Medicine (AOBEM)-certified emergency physicians (EPs) are paid significantly better than the rest of the physicians staffing the EDs of our

nation.<sup>4-9</sup> This is due to a national trend by administrators, hospital medical staff, insurers and credentialing bodies to increasingly recognize added value to ABEM- and AOBEM-certified EPs. ABEM- and AOBEM-certified EPs and EM residency graduates are heavily recruited and end up, slowly but surely, replacing the physicians who are not eligible for EM board certification, driving them to work in less desirable conditions and practice settings.<sup>1-3</sup> Physicians who are not eligible for EM board certification recognized 1) the higher pay offered to ABEM- and AOBEM-certified EPs and 2) the national trend affecting them, replacing them with ABEM and AOBEM-certified EPs. Many of them began organizing at the beginning of the last decade, with the goal of re-opening EM board certification by ABEM and AOBEM to physicians who have not been residency-trained in EM and were therefore no longer eligible since 1989 to take these two board certification exams.

This organizational effort resulted in the creation of the "Certification Section" within the American College of Emergency Physicians (ACEP) and in the establishment of a separate independent organization, the Association of Disenfranchised Emergency Physicians (ADEP), which later changed its name to the Association of Emergency Physicians (AEP). This organization feels that physicians who are non-residency trained or trained in other specialties should be able to practice EM and receive ABEM and AOBEM board certification through the "practice track." The "practice track," which was closed in 1988, required 7,000 hours during 5 years of full-time EM practice. In less than a year, the "ACEP Certification Section" grew to be the largest and most vocal college section. Year after year, it proposed resolutions to the ACEP Council that called for equal recognition and status in the College for physicians who were not EM trained or board-eligible. They also proposed the creation of mini-residencies and the establishment of alternative tracks to board certification, etc. The College listened and provided a forum for discussion and debate. In 1993, a resolution nearly passed that would have granted FACEP status to non-boarded physicians practicing EM.

To further complicate matters, Gregory Daniels, a physician who completed three years of residency in general surgery, and was practicing EM in Buffalo, NY, filed suit against ABEM in 1990. He alleges that the closing of the EM

practice track was an illegal conspiracy to enhance the economic position of board certified EPs and that ABEM and the co-conspirators had an individual personal economic interest and stake in the success of the conspiracies and schemes. Daniels alleges that ABEM and others, such as the Council of Emergency Medicine Residency Directors (CORD), conspired to create an artificial shortage of ABEM-certified EPs and thereby to manipulate the marketplace. Ironically, some of the defendants such as CORD did not even exist in the mid-1970s when the decision to close the practice track in 1988 was made! *The case remains in litigation as of this date.*

The schism had reached a point where many EM faculty and board certified EPs felt the need to counter what many referred to as the "aggressive assault on board certification" in EM. ACEP, which played a central role in establishing ABEM and the guidelines for certification eligibility, was omitted from the defendants list and opted not to take action or an official direct position on the issue of this lawsuit. This probably was the spark that ignited a number of College leaders and members to establish the American Academy of Emergency Medicine (AAEM). The primary objective behind AAEM is to actively promote and defend board certification by ABEM and AOBEM, as the only legitimate qualification to practice EM, and ACGME- and AOA-accredited EM residency training as the only currently legitimate path to EM board certification.

One should note however that at this point in time, the College (ACEP), the Academy (AAEM), CORD and the Society for Academic Emergency Medicine (SAEM) all stand united in their definition of the qualifications for unsupervised emergency medical care.<sup>10-13</sup> The current message is clear, stating that "the independent practice of EM is best performed by specialists who have completed American Board of Emergency Medicine (ABEM) or American Osteopathic Board of Emergency Medicine (AOBEM) certification, or have successfully completed an Accreditation Council for Graduate Medical Education (ACGME) or American Osteopathic Association (AOA) accredited EM residency, and is in the process of completing ABEM or AOBEM examinations. Residents-in-training or other physicians who do not meet these criteria are less likely to possess the cognitive and technical skill set necessary for rendering unsupervised care for the tremendous breadth and acuity of situations encountered in an ED."

In addition, AAEM asserts "that board certification through ABEM or AOBEM is recognized as the standard that establishes competence in the diagnosis and management of conditions in Emergency Medicine."

The restriction of employment or access to fellowship training programs for board-certified EPs based upon a requirement of prior EM residency training is



improper. AAEM asserts that equality of status between residency trained and practice track physicians is established by board certification, and equity of both educational and professional opportunities should follow.

"This is to recognize the fact that there is a period of time in the early formation of every specialty where no formal residencies exist, and that it was therefore appropriate to create a time-limited practice track for the founders of the specialty to become board certified. Currently and for the future, in the interest of patient welfare, accredited Emergency Medicine residency training is the only acceptable pathway to ABEM/AOBEM certification."<sup>13</sup>

To be fair to these physicians who are dedicating time and often career to serve emergency patients, we should recognize that the shortage in EPs and the financial pressures which drove them to work in the EDs are to some extent comparable to the ones that led nearly 25% of our currently ABEM- and AOBEM-certified EPs, all senior in their careers at this point, to practice EM.

However, times have changed, and EM residency training now exists and provides a continuing influx of proficient properly trained EPs. Throughout their EM residency training, these graduates have been *adequately supervised* by qualified faculty in *strictly monitored accredited EM residency programs*. The issue is not whether 7,000 hours of ED practice experience can teach an unsupervised, well-meaning, motivated, self-learner medical school graduate what they were missing on the first day they cared for patients in an ED. The issue is that re-opening the practice track, at this point in time, is simply no longer acceptable since "learning as you go" carries a higher risk of unnecessary bad outcomes and complications.<sup>14-21</sup> One recent study has shown that EM-residency trained EPs are significantly less likely to get sued than EM practitioners who have less than 5 years of practice experience in an ED.<sup>21</sup>

In this day and age, with EM residency training widely available, it is simply unethical to advocate or allow additional "training on the job" on unsuspecting patients as a formal path to board certification and a lifetime career for non-EM residency graduates. Alternative physician providers without the adequate training to meet the needs of a specialty with a shortage for qualified EPs, should be used to supplement board certified EPs, and not be left unsupervised. Plans to redistribute the current board certified EPs to meet the needs of undesirable areas and EDs should be developed and implemented, in partnership with the authorities and hospital leadership in those institutions and areas.

## PHYSICIAN EXTENDERS

Over the last two decades, non-physician providers, known as "Physician Extenders," appeared in our EDs. Physician assistants (PAs) and nurse practitioners (NPs) were being employed by hospitals and ED physician groups to supple-

ment their EPs. This originally was intended for EDs where: 1) EP staffing was difficult to secure due to a shortage in the supply of qualified or interested physicians, and 2) the number of patient visits, payer mix and reimbursement rates could not sustain adequate revenue to pay for additional board certified EPs.

This reliance on using PAs and NPs has proliferated over the last two decades, is present in at least a third of the nation's EDs, and is reaching alarming levels in certain states, where nearly 50% of all EDs report using them.<sup>1, 2, 22</sup> The alarming aspect of such reliance is certainly not the actual utilization by contract holders of qualified and adequately supervised non-physician providers to assist EPs when caring for ED patients. We shall describe next the serious concerns organized EM and EPs have expressed with regard to the use of PAs and NPs.

Our readers should note that our definition of a "contract holder" includes the whole scope found in EM practice, irrespective of whether the contract holder is fair, democratic, one individual, a number of senior physicians, a partnership, or a corporate lay entity with multiple ED contracts. They all hire alternative providers and are therefore subject to the following concerns often expressed by EPs and specialty leaders:

- 1) The reason behind such proliferation is often to augment the net revenue of the contract holder. Contract holders provide care for a larger number of patients per hour, by hiring someone less expensive on an hourly basis than a board certified EP, to care for additional patients. The EP who is practicing in the ED "assisted" by a PA or NP supervises them, augments the net hourly revenue generated in the ED, and carries the additional liability, often without receiving additional compensation for the extra effort and productivity.
- 2) This scenario often becomes a quality and patient safety issue. EP assistance or supplementation means that the PAs and NPs should receive adequate supervision, in real-time, by the EP they are assigned to when working in the ED. This is not the case. Nationally, NPs and PAs staff EDs unsupervised in a number of states and settings. This is done independent of any EP direct supervision or through an EP on-call system or retroactive chart review.
- 3) When an EP does not receive additional compensation for the increased productivity and liability or adequate time to provide the appropriate real-time supervision, the medico-legal liability should be carried by the contract holder that hired the extenders. This should not be imposed on EPs who often report being given no additional compensation and no choice, if they want to work in that ED, other than signing the

PA and NP charts *long after* the care has been delivered and the disposition completed.

- 4) PAs and NPs should limit their scope of practice to the procedures, case complexity and case load that is appropriate for their limited training, and not be left to "learn as they go" how to manage complex and high acuity patients.
- 5) PAs and NPs who assist EPs should receive EM specialty-specific training and credentialing, prior to their employment in EDs.

AAEM and ACEP stand united in this regard, with position statements calling for adequate real-time supervision and EM-specific training of all physician extenders as the only safe and proper way to deliver care to emergency patients.<sup>10, 23-25</sup> It is our understanding that AAEM and ACEP oppose tactics of contract holders that hire physician extenders to practice EM independently and without adequate supervision. AAEM and ACEP believe these providers are not qualified for the independent practice of EM. EPs believe that their use should be adequately supervised, onsite and in real-time, by EM boarded EPs, and limited to areas where a shortage for EM board-certified EPs persists.

Of course, the issue here is who is benefiting from the misuse of physician extenders? How is it affecting patient outcome? And what is the role of professional societies? Should they take policy to practice and ensure contract holders, often EPs themselves and members of our professional organizations, do not engage in such misuse?

## References:

- 1) Moorhead JC, Gallery ME, Hirshkorn C, et al. A study of the workforce in emergency medicine 1999. *Ann Emerg Med.* 2002;40:3-15.
- 2) Moorhead JC, Gallery ME, Mannle T, et al. A study of the workforce in emergency medicine. *Ann Emerg Med.* 1998;31:595-607.
- 3) McGirr J, Williams JM, Prescott JE. Physicians in rural West Virginia emergency departments: Residency training and board certification status. *Acad Emerg Med.* 1998;5:333-6.
- 4) Katz B. The emergency medicine marketplace for 2001/2. *Emergency Physicians Monthly.* September 2001.
- 5) Katz B. The emergency medicine marketplace for 2002/3. *Emergency Physicians Monthly.* September 2002.
- 6) Katz B. Job searching on the web & the emergency medicine market for 2001/2. EMRA Life after Residency. American College of Emergency Physicians Scientific Assembly 2001; ACEP Program Syllabus, page 15.
- 7) Katz B. Personal communication. The Midwest Salary. Compiled for Premier Healthcare Services of Ohio by the Cambridge Group, Ltd., March/April, 2001. The Katz Company, Inc. Tampa, FL; katzco@tampabay.rr.com.
- 8) Katz B. Personal communication. Virginia Salary Survey. Compiled for the Lewis Gale Clinic, Salem, VA, by the Cambridge Group, Ltd. March/April 1999. The Katz Company, Inc. Tampa, FL; katzco@tampabay.rr.com.
- 9) Katz B. Personal communication. Emergency Medicine Salary Survey 2001-2 (for physicians who are not ABEM or AOBEM boarded in EM). The Katz Company, Inc. Tampa, FL; katzco@tampabay.rr.com.
- 10) The American College of Emergency Physicians. Providers of Unsupervised Emergency Department Care (Policy #400302, Approved June 2001). ([www.acep.org](http://www.acep.org))
- 11) SAEM position statement on the qualifications for unsupervised emergency department care. *Acad Emerg Med.* 2000;7: 929.
- 12) The American Academy of Emergency Medicine. Mission Statement. 1993. ([www.aaem.org/aboutaaem](http://www.aaem.org/aboutaaem))
- 13) The American Academy of Emergency Medicine. Position Statement on Non-Discrimination of Practice Track vs. Residency Trained EM Physicians (adopted 2/21/01). ([www.aaem.org/positionstatements/openbooks](http://www.aaem.org/positionstatements/openbooks))
- 14) Berlin L. Liability of the moonlighting resident. *Amer J Roentgenology.* 1998;171:565-7.
- 15) Trautlein JJ, Lambert RL, Miller J. Malpractice in the emergency department - Review of 200 cases. *Ann Emerg Med.* 1984;13:709-711.
- 16) Martin PB, Shapiro C. A review of specialties and allegations in house staff claims and suits within the Harvard Medical Institutions. Forum, Risk Management Forum of the Harvard Medical Institutions Inc. 1993;14:3-5.
- 17) Tan MV. Clinical fellows with limited emergency care experience targets of "moonlighting claims". *Harvard Risk Management Foundation Forum.* 1987;3:6-7, 14.
- 18) Divoll RN, Holzer JF. Moonlighting house officer. *NEJM.* 1985;312:863.
- 19) Dasse PS. Why risk management needs to be part of house staff training. Forum, Harvard Risk Management Foundation of the Harvard Medical Institutions Inc. 1993;14:1-2.
- 20) Ramachandran D. Rates of disciplinary actions and postgraduate training years of licensees: Final report. Presented to the Medical Board of California, January 14, 1998. The Medical Board of California - Division of Licensing Agenda. February 6, 1998.

- 21) Branney SW, Pons PT, Markovchick VJ, et al. Malpractice occurrence in emergency medicine: Does residency training make a difference? *J Emerg Med.* 2000;19:99-105.
- 22) Kazzi A, Phelps M, Gee B, et al. 1995-2000 trends in emergency department utilization of physician extenders and lower acuity tracks: A 5-year longitudinal report. *CaJEM.* 2002;2:52. ([www.cajem.com](http://www.cajem.com))
- 23) The American Academy of Emergency Medicine. Position Statement on Physician Assistants/Nurse Practitioners. Adopted by the AAEM Board of Directors, May 20, 2000. ([www.aaem.org/positionstatements/physicianasst](http://www.aaem.org/positionstatements/physicianasst))
- 24) The American College of Emergency Physicians. Guidelines on the Role of Physician Assistants in the Emergency Department (Policy #400117, Approved February 2002). ([www.acep.org](http://www.acep.org))
- 25) The American College of Emergency Physicians. Guidelines on the Role of Nurse Practitioners in the Emergency Department (Policy #400123, Approved June 2000). ([www.acep.org](http://www.acep.org))

## 48

## Greed in Emergency Medicine: The Enemy Within

## RESIDENT AUTHOR:

Brian Potts, MSIV, MBA Candidate (Board of Directors and Medical Student Representative, the AAEM Resident Section / University of California, Irvine)

## FACULTY AUTHOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (AAEM Vice-President / Vice-Chair, University of California, Irvine)

## FACULTY EDITOR:

Robert McNamara, MD, FAAEM (Immediate Past President, the American Academy of Emergency Medicine / Chairperson & Professor, Temple University, Philadelphia)

## IS THERE GREED IN EMERGENCY MEDICINE (EM)?

Certainly there is.

## MISUSING ALTERNATIVE PROVIDERS

We just talked in chapter 47 about the potential for misusing nurse practitioners (NPs) and physician assistants (PAs) to augment the bottom line of the owners or stake holders of physician groups. This potential can occur in all specialties, and not only in EM, when the stake holders who own emergency department (ED) staffing contracts benefit directly from the cost saving associated with the use and misuse of PAs and NPs.

The same concept can be applied by the contract holders or their executives when they have a choice to hire a board certified Emergency Physician (EP) and instead employ an alternative provider (e.g., moonlighter, physician with no EM training, NP or PA). The truth will probably surprise you as much as it surprised the American Academy of Emergency Medicine (AAEM) when it first discovered it. As a result of the discovery process of a well-publicized lawsuit against one of our founding leaders by one of the nation's largest contract management groups (CMGs), AAEM obtained official documents from the CMG executives that instructed their own recruiters to seek physicians who are not EM board certified because they were less expensive to hire to staff EDs. The documents even predicted an EP surplus at which time these (board certified) EPs needed "to be weeded out."<sup>1, 2</sup>

Utilizing less qualified practitioners in EDs when there is a geographic shortage of EM board-certified (or eligible) physicians (i.e., EPs) makes sense. However, hiring moonlighting residents or drop-outs from non-EM residencies instead of available EM board certified EPs, simply to augment the income of the contract group stockholders, is greedy and unethical.

## OVERBILLING, UPCODING AND CLOSED BOOK POLICIES

Greed can also be manifested in corporate schemes to overbill patients, upcode charges, and hide professional fees from the EP generating them. This is often done without the knowledge of the practicing EPs, who are often kept in the dark when they work for CMGs or contract holders who do not provide an "open book" policy. A recent AAEM report indicates 20-40% of EPs practiced in a setting where the "books were closed."<sup>3</sup> In such a "closed book" practice, EPs are not allowed to access information about what is actually billed or collected in their individual name by the contract holder. This is done through the "reassignment" of billing and collection to the CMG through the employment contract which is expected by a number of EP groups when hiring any physician to staff an ED.

Ironically, this is out of compliance with Medicare rules. After being prompted by AAEM to take a look at this trend, federal authorities "discovered" the irregularity of the reassignment of professional fees to entities and individuals other than the physicians who are caring for the patients. The "feds" (Medicare) then instructed all CMGs and contract holders that physician payments should go directly to the EP, unless they were employed. At all times, federal authorities *expected any EP to have access* to review his or her billings and collections, and *to be responsible for what is billed and collected* under his or her name.<sup>4-8</sup>

Unfortunately, up to 40% of EPs practice in settings where the contract groups continues to hide the books, using tactics such as bank "sweep accounts" or the conversion of their EPs to employees instead of keeping them as independent contractors.<sup>7, 8</sup> Indeed, by 2002, the percentage of EPs practicing as "employees" had risen up to 70% of the total EM workforce, which is an unprecedented high level within the house of medicine.<sup>9, 10</sup> With AAEM working with the federal authorities and alerting them to the existence of such tactics and providing on-going follow-up on these matters, this battle continues.<sup>11</sup>

Ironically, the lack of fairness in this skimming becomes more evident and is compounded when a CMG, contract holder or billing company is actually audited and penalized by Medicare for charges it retroactively considers unjustified.<sup>12</sup> Although the care has been provided years earlier, the financial burden for the penalty (or at least a portion of it) is sometimes passed over to the EPs working for the ED group at the time when the penalty is paid. One would reasonably assume that federal authorities would have provided for a fair process in their enforcement of these audits. The process should provide for the penalties to be paid only by the stockholders, partners or contract owners of the physician group who primarily benefited from the excessive charges at the



time *when* the care was provided. However, the "feds" just want the Medicare money back and have so far not addressed who ends up forced to pay it back.

### COVETING THE "ED CONTRACT"<sup>13-15</sup>

Another form of greed is manifested in "coveting ED contracts," when contract holders raid each other's practice, trying to snatch from another EP group the exclusive right to staff an ED.<sup>13-15</sup> Such activity is driven by one bottom line: MONEY. This may well be "most dangerous" because such corporate raiding strategies cheapen the value of our specialists and of the service they provide to hospital administrators and the medical staff. As a result, we are seen as easily expendable, with a line-up of CMGs and contract holders drooling over the prospect of gaining the "exclusive contract" to staff their ED. Hospital administrators receive mailing after mailing and call after call from EP group executives.<sup>13</sup> These contract holders and EP groups' executives will devise and make elaborate attempts to get through the door to a hospital administrator's office in order to make a case that *their* EP management group can offer more quality for less cost and resources.<sup>13, 15</sup> They all claim exceptional efficiency, quality assurance, resource management, and the rest of the jargon hospital administrators like to hear. They often buy full page advertisements in the hospital administrators' publications and newsletters and reserve booth space at their conventions and professional meetings. They promise the world, and consent to fewer and fewer resources for their physicians, patients or EDs. Heavily rewarded for securing an exclusive contract to staff an ED, the EP contract holder or executive claims to provide more service and better quality, for less resources and professional rights. They often make promises that cannot be kept.

For this reason, EPs often find themselves unable to successfully negotiate for the basic resources, staffing, policies and equipment that are needed to provide the same quality of service found in their hospital's operating rooms or intensive care units. Groups that raise issues regarding inadequate nurse staffing, space, equipment or the like can be threatened with replacement because the administrator sees willing suitors. This is another reason why certain groups require EPs to sign a waiver of their right to due process or a non-compete clause. In 2003, 20% of EPs reported having no right to due process. Another 30% reported the existence of a non-compete clause in their contract.<sup>3</sup> In such a practice, EPs are intentionally denied job security because the administrators and contract holders see no need to do otherwise. We cannot open our own ED! In such cases, we are forced into second class citizenship on the medical staff, being required to waive any rights to the hearing provided upon termination to physicians in other disciplines at the same hospital. Needing a



job within a particular setting, EPs are often given no other choice than to agree to sign contracts with clauses for *termination without cause*.

This of course does not apply to every institution and to every EP group. As a matter of fact, the 2003 AAEM survey indicates nearly half of the EP workforce has access to due process, 60% have access to their billing and collection information, and over 80% are satisfied with their EP group and feel they are being fairly compensated.<sup>3</sup> However, every EP should understand these issues, particularly those feeling comfortable in fair groups since they are constantly a target of this predatory practice. It is not uncommon to find fair and democratic EP groups being displaced by a "buzzard" that first promises administrators the world and subsequently delivers a mediocre service.<sup>14</sup> For more detail, refer to the "Rape of Emergency Medicine" by James Keaney, our first AAEM president and co-founder.<sup>15</sup>

Over the last decade, due to AAEM's vigilance, pressure and widespread educational campaigns, these conditions have slowly and surely improved. Non-compete clauses and waivers of due process have been widely denounced in the specialty. However, as of 2002, they remain a common reality.

Corporate raiding continues unabated, displacing EPs and their families, from the community where they had been living. However, over the last 5 years, there have been a few exceptions, which AAEM has significantly contributed to.<sup>16-18</sup> This is best exemplified in the landmark lawsuit by a coalition of EP groups, Affiliated Catholic Health Care West (ACHP), against Catholic Health Care West (CHW), one of the largest hospital corporations in the USA.<sup>16, 22</sup> CHW bought an EP staffing group and reorganized it into "Meriten." Meriten would manage EPs' practice and deduct from their professional fees ALL expenses plus an initial 17% profit that was a variable rate that CHW would control and set based on "market" pressures. This forced "skimming off" of EPs' hard-earned professional fees violated the laws prohibiting the corporate practice of medicine by lay entities and was also unethical by nature of the coercive kickback CHW gave itself by self-referring ED patients strictly to augment its own profit margin. CHW began preferentially awarding 40-50 ED contracts to its own for-profit entity, firing EPs, some after 25 years or more serving an institution or community. The EM groups working in CHW hospitals came to AAEM and received full support. This included letters of support, direct warnings to CHW's executives and leadership, educational sessions and panels, guidance through the historical lawsuit that followed, and a landmark Amicus Brief filed by the AAEM, its California chapter (CAL/AAEM) and the California Medical Association (CMA). AAEM, CAL/AAEM, the CMA and a number of other hospital-based specialties joined forces exposing and denouncing the unethical kickback scheme and the violation of the laws prohibiting lay

entities from owning physician practices. Had this scheme passed through the court battle with a decision against the EM groups, over 10% of California EDs would have been affected initially. Other hospital chains would have certainly followed suit and turned this scheme into a national trend to skim considerable net profit off the top of an EP's professional fees and to take full control of the income and practice of EPs and other hospital-based physicians.

The CHW-ACHP battle illustrates an unquestionable fact: AAEM remains the only EM organization that has taken a visible unequivocal stand and pursued legal action against the issue of corporate raiding and illegal kickbacks or skimming off EP professional fees.<sup>16, 17, 22</sup> AAEM is guided by what it believes to be fair and best for our patients, for the well-being of our workforce, and for the future of our graduates.

In another case, the outcome was not as successful as AAEM would have liked, and one specific democratic physician group was not saved from losing its ED contract.<sup>18-21</sup> However, AAEM's effort contributed to the contract being awarded to an EP-owned group where EM board certification was required and where the affected EPs had the option of remaining at the ED where they were working.<sup>19-21</sup> These are not "private business matters" that EM professional organizations can ignore or remain neutral about. Coercive contracting and the devaluation of residency training or EM board certification, the sale of contracts and of the control over future income and practice conditions are not just a dangerous threat. They are a very damaging and ongoing reality. Assertive action to address them is of critical importance to the well-being and career longevity of our specialists, one that exceeds EPs' concern with external threats such as the malpractice crisis and Medicare cuts.

#### FAIRNESS IN THE WORKPLACE

These "Physician Practice Management" firms (PPMs), which we have been referring to as a CMG can be owned by any combination of the following: a single physician owner, a number of senior partners, or a corporate entity with a blend of physician or lay individual shareholders and a wide variety of share distribution. These PPMs or CMGs own the "ED exclusive staffing contracts." Their control extends over a wide number of EDs. Many staff one ED, while others control between a handful of EDs up to nearly 400. It is estimated that up to 50% of the nation's EDs are controlled by the large CMGs.

In general, the executive(s), senior partner(s) or contract holder(s) of unfair CMGs have considerable or total control over the EP and practitioners' qualifications they hire, the allocation of undesirable shifts, and the distribution of the net revenue generated by clinical care provided collectively by all EPs practicing in an ED. They often also have considerable if not total control setting the price for the EP group management fees and for their own compen-

sation packages.

Through various schemes, these unfair groups which we are criticizing do not share with their practicing EPs the total collected by individuals or by the group or the breakdown of expenses. Often, they are even audaciously upfront in their intent to conceal these numbers from the physicians they recruit. They pay their rank and file physicians a pre-set hourly salary. They directly collect all professional fees billed in the name of all the physicians they schedule in the ED that they are contracted to staff.

The majority of EPs (80%) we surveyed do not feel exploited.<sup>3</sup> They practice in an environment they consider fair. A majority (60%) indicates access to the book and practicing in a partnership arrangement.<sup>3</sup> Variations exist in the degree of profit sharing with the employees or partners - if allowed. Many PPMs - typically the truly democratic groups and partnerships - share an open book policy, provide adequate management fees and expenses that are openly and periodically disclosed, and then pass the net revenue to the actual clinician generating the professional charges.

However, EPs must be careful not to accept the promise of "partnership" at face value and investigate exactly how one will fit into the governance of the group and fare in the profit distribution.

### TAKING POLICY INTO PRACTICE

As stated earlier, AAEM's action, taking policy beyond words and into practice, is best exemplified in the California legal battle that the Academy supported and participated in.<sup>14</sup> Without hesitation, it strongly confronted the 1998 attempt by a hospital chain (CHW) and a greedy handful of non-practicing EP executives to take over the practices of another 40 EP groups in the Western states. Had this deal gone through with its unethical fee-splitting scheme, it would have rapidly become the norm across the rest of the nation. Hospital administrators and lay entities would have dictated the way we practice in EM and taken over 17% of our EP income for pure corporate profit. For more information on this major battle and victory, refer to the AAEM website under ACHP-CHW or to the *California Journal of Emergency Medicine* articles on the topic.<sup>16, 17, 22</sup>

#### "Exit Strategies" and the Contract Holders' "Retirement Funds"

During the 1990's, after having practiced EM or owned EP staffing groups for 20-30 years, many EM contract holders began finding themselves nearing their "golden age." Some openly refer to this as "the age of retirement." This resulted in a trend to sell contracts to the highest bidders, often referred to as "an exit strategy" (and by some contract holders as their "retirement fund"). Speaking one-on-one to these "retiring" senior contract holders, one will be struck by the firmness of their conviction that their schemes to generate

such funds were legitimate, and that these sums were truly theirs to take. They fail to see that they are, or have been, actually selling away the administrative control over the EPs' future practice. As they retire or merge with a larger CMG, they essentially "cash-in" a sum, typically a portion of the net revenue predicted to come in future years. The money to pay for this "buy-out" of the contract is then generated by EPs who will practice in their ED(s) in the future.

This is on top of the fact that these contract holders had been generously paying themselves large portions of their practicing EPs' professional fees year after year.<sup>6, 15</sup> Their "retirement fund" should have already been furbished by the past labor of clinicians who had worked for them through the history of these contracts. The future labor and income potential of clinicians simply should have never been a commodity that contract holders could sell. It belongs to future EM residency-graduates and to the clinicians who will administer or work the future shifts in these EDs.

In the 1990s, "exit strategy" schemes gained prominence in EM through the proliferation of sales of ED staffing exclusivity contracts to either 1) larger management groups or 2) hospital corporations. These two processes are respectively referred to as "Horizontal" and "Vertical Integration."<sup>22</sup> Such "contract acquisition" was often funded respectively by either a number of PPMs going public or by hospital corporations. The senior partners or contract holder(s) would then receive cash and stock options that typically far exceeded the net revenue they made in 1-2 years of "managing" the physicians working for them. As a result, many multi-millionaires surfaced in the last decade in EM, enticing many of the other contract holders to seek such large profits through similar "exit strategies."<sup>6, 22</sup>

Over time, bankruptcies and financial losses then began to plague these newly emerged consolidated PPMs. Affected EPs were then forced to accept unexpected reductions in their income. In addition, EPs found themselves employed by larger entities, leaving them with a further weakened ability to practice medicine without excessive interference by non-physician administrators or non-practicing physician executives.

The AAEM has always been firmly positioned against both vertical and horizontal integration. The message is clear: such integration violates laws that prohibit the corporate practice of medicine. Vertical integration in particular violates anti-kick back regulations. Exit strategies should be fair. They should be mainly limited to the portion of the "exiting" EP's professional charges from patient care that he or she had already provided and is still owed to him or her at the time of departure from an ED group.

This exit payment is not a simple matter to calculate. It should take into

consideration assets purchased during the time spent in the EP group, the ones present at the time of joining the group, and whether an "entry strategy" was also used. "Entry strategy" refers to a formula that provides income to pay the EP before his or her charges to patients and health plans begin rolling in, while working for that ED. Entry strategy also refers to any "buy-in" amount paid for by the now exiting EP when he or she was working to become a partner in owning the assets of the physician group. Partners and clinicians in any group should be able to devise an equitable "exit" formula that applies to all EPs in that group alike. All other forms used to fund that "retirement" are illegitimate, unwarranted, and constitute nothing more than an opportunistic sale, rather theft, of the future and well being of other EPs.

### GROUP CITIZENSHIP VERSUS SERVITUDE

For decades, the medical community and contract holders portrayed EPs as *shift workers* who liked "to work hard and play hard," or migrating practitioners with limited interest in actively contributing to the administrative duties of the medical staff and hospital administration. Such portrayal and the status quo in EM have provided the unfair type of contract holders to maintain an exclusive relationship with the hospital leadership. In fact, EPs working for an unfair CMG or contract holder have often been limited from interacting with the hospital leadership and from gaining institutional credibility and history. After all, such interactions could provide grounds for interference by the clinicians in the ED contract or introduce administrators to an alternative (and sometimes more qualified) leadership to run the ED.

### ARE WE MIGRANT WORKERS?

This may have been true in the early history of the specialty when our workforce was largely composed of physicians who had drifted into EM, had another career in mind and no commitment to the specialty. This, however, does not apply to the current day and age. Our "new generation" of residency-trained EPs now has or wants a stake in their hospital and community and in the recognition of the special value of their training and specialty. The 2003 AAEM survey found 83% of responding EPs "willing to participate in day-to-day management as a requirement of acquiring an ownership stake."<sup>23</sup> While it is true that there will always be physicians who do not wish to participate in any administrative functions, the opportunity must exist for those wishing to control their destiny.<sup>23</sup>

One recent American College of Emergency Physician (ACEP) study also examined this subject.<sup>24</sup> Its findings demonstrated that 70% of EPs had "limited negotiating power when it comes to contracts." Almost 80% stated they were "against" large corporate groups.<sup>24</sup> Only 14% favored them, which suggests that the majority of EPs want exactly what AAEM has been promoting: a practice

environment where EPs have ownership and actual input into their institution and group. We should note that the same study indicated 82% of these EPs felt "secure in their jobs," 70% were "satisfied with the overall state of the specialty," and "75% with their clinical environment and the income they receive as EPs."

Another way to look at the same ACEP data suggests that 25-30% were dissatisfied with their careers and the income. Nearly 20% felt insecure in their practice. These findings, therefore, add some support to the 2003 AAEM survey we have been referring to in this chapter and to a 1998 AAEM study which reported that 75% of board-certified EPs felt financially exploited and that 15% had been terminated at least once without cause.<sup>25</sup> More importantly, 49% of these EPs reported having considered leaving EM due to unfair business practices.<sup>25</sup>

An additional 1995 study of American Board of Emergency Medicine (ABEM) certified EPs by Doan-Wiggins et al. lends strong support to these statements and is certainly worth mentioning as it reported significant dissatisfaction among EPs due to financial exploitation, to termination without due process, and to job security issues.<sup>26</sup> The authors reported 25% of EPs felt burn-out and 23% stated that they were planning to leave the specialty within 5 years. Minor differences existed based on EM training or practice track certification.

Certainly, institutional citizenship and participation in the administration of the EP group remains a personal choice for every EP to make. However, it is imperative to give clinicians the choice and opportunity to be citizens in their group, their medical staff and the institution they work at. The physician who is an owner of their practice is naturally more invested in providing the best for the patients, the medical staff and the hospital. The security that comes with such control and the absence of feeling exploited contribute to the well being and career longevity of the EP.<sup>10, 23</sup>

### WHAT IS FAIRNESS?

This certainly is most difficult to define, with individuals, EPs, contract holders and other entities providing a widely divergent interpretation of what they each consider to be "fair." The AAEM and ACEP and their California chapters have developed or endorsed landmark EPs' bills of rights, positions and vision statements, providing guidelines that define fairness (see Appendices A, B, C and D). Still, what is fair to you may not seem fair to your partner or EP group administrator. Some will state that if you receive what you have been promised when you were contracted, you have been treated fairly. Others will insist that fairness can be defined only by an absolutely egalitarian approach to dividing net revenue shift distribution, and governance of an EP group. Some will pro-



vide no differential pay for expertise, seniority, special service or talent. Many will passionately argue that administrative time is less valuable than clinical care, and yet refrain from engaging in it or volunteering for such service. Enlightened groups will recognize that the special skill, expertise and extra commitment required for time-consuming administrative duties must be rewarded if the EPs wish to have a well-run, stable, quality patient care-driven and optimally profitable group practice.

Would you rather work for a totally egalitarian, yet poorly run group in a setting where hospital administrators are hostile and threatening to give away your exclusive ED staffing contract due to administrative shortcomings? Or would you rather work for a structured and open-book EP group with predefined bylaws, due process, partnership tracks, a stable contract and a designated EP manager with special talent who is receiving adequate pay for his or her time, commitment and expertise? How to achieve balance on this matter is a critical and extremely tricky priority that EPs cannot undervalue and that we must emphasize.

Groups should provide fair compensation to the administrators and to any partners in an EP group who dedicate a disproportionately larger amount of time and talent to adequately address the non-clinical functions, the maintenance and the development of the ED contract. An EP administrator or partner who dedicates more time than the average full-time equivalent number of hours and who must be available all week-long to respond to hospital administrators' concerns should receive compensation that is proportionate to the sacrifice that is made. This, however, should be directed towards the administrators or partners who indeed provide such service to their group, and not to the ones who hire medical directors to attend to these needs, and live a life of leisure and luxury while relying on their very well-paid midlevel executives to run their EP contracts and CMGs.

The bottom line is that what is fair to you may not seem fair to your partner. Fairness is, therefore, a very difficult matter to define in a manner that will please everyone. However, one can state with certainty that the basic elements required to ensure "fairness" include predefined formulas and policies 1) to distribute collected professional charges; 2) to advance through well-defined partnership tracks; 3) to change group bylaws and to develop new policy; 4) to provide input into the decisions of the whole group; 5) to terminate or hire an EP; 6) to enter and exit a group; 7) to distribute undesirable shifts; 8) to mediate issues when they come up; and 9) to openly disclose income, assets and administrative expenses. For additional information on this topic, refer to the CAL/ACEP and ACEP bills of rights for EPs and to AAEM's Vision Statement and to the other position statements of these professional organizations

(see Appendices A, B, C and D).

## DEMOCRACY

This is another difficult matter to define. Over the last decade, since AAEM was founded and emphasized to graduating residents the importance of democratic principles in group governance, an increasingly larger number of PPMs have begun claiming to be democratic entities. A quick overview of information reported to the AAEM leadership demonstrates that the definition of democracy varies among EP groups and is a subject of debate and argument. Democracy consists of providing EPs with the ability to elect their leaders and to vote on the decisions that affect the entire group. Unfortunately, many PPMs claim to be democratic to attract new recruits to work in their group.

However, they may conceal the fact that many core issues affecting the group are not debated or amenable to a vote or change, that the senior contract holders always carry the majority of the vote, or that part-timers or new EP recruits do not vote. Sometimes the working EPs can vote on the issues, but cannot elect the group leaders or representatives to hospital committees or provide input into the selection process.

The defining point or bottom line here is *pre-employment disclosure of the terms of engagement*, with *specific attention to detailing the bylaws or rules used by the EP group to govern its affairs*. Such *full disclosure, and nothing less*, is particularly essential to expect from a group that claims democratic governance.

Such non-disclosures and undemocratic practice trends should be exposed and denounced. They violate AAEM's vision of fairness and the principles of predefined governance, which it advocates. EPs must be educated to understand these issues and to differentiate between groups who claim a democratic structure. This section of the chapter is one clear attempt to guide future EPs to examine these critically important nuances and to clearly establish them before signing a contract.

What is the role of organized emergency medicine in these matters?

In the 2003 AAEM survey, 84% of responders "believed it is the appropriate role of national societies to sanction EM groups that violate the societies' standards of fair business practice."<sup>3</sup> These numbers are most revealing!

This strategy is core and so far unique to AAEM. AAEM will not promote EP groups that do not comply with its principles of fairness and EP ownership. AAEM will also not allow these non-compliant groups to advertise through its venues (meetings and publications). EP groups are required to sign a certificate of compliance with the AAEM principles which can be viewed on our website and provide a basis for an EP to challenge the group's methods of operation.<sup>27</sup> In addition, as we prepare to publish this book, AAEM has devel-



oped an ethical standard that defines proper ways to bid for the contract of another EP group. This policy is in its latest phase of development and will be voted on in a few days at a board meeting. Corporate raiding cannot go on in the manner we have seen over the last 4 decades. AAEM members who violate these standards will be subject to an ethics violation and could be sanctioned by their professional society. If all professional organizations were to adopt such policies, EM as a specialty, its physicians and their patients will all benefit by creating a healthier environment where we can all safely advocate for our patients without the fear of reprisal by the hospital administration or other members of the medical staff.

Should graded voting authority and incremental ownership be acceptable forms of democracy that AAEM promotes? Are transitional periods before partnership or voting authority practice trends that meet the fairness principles advocated by the Academy? AAEM's democratically elected leadership has clearly positioned itself against unreasonably prolonged or ill-defined probationary periods and graded partnership tracks. AAEM does not only want EP groups to implement mechanisms to disclose and distribute individual and group gross and net revenues. *AAEM also advocates that fair, "democratic" EP contracts must include well-defined review, advancement, and mediation clauses, as well as a clearly established governance system that spells out the grading and scope of voting authority of all partners in an EP group.*

This reminds us of a question that a contract holder asked one of us once: "Would you rather work for a failing inefficient democracy or for a proficient fair autocrat?" An autocratic fairness! Can this exist?

Yes, contract holders do not have to be democratic to be fair. They just have to pre-define and well define ALL aspects we discussed about the ED contract. Of course they also must keep the promises they make before employing an EP. They must fully disclose collections and expenses, have no termination without cause, no restrictive covenants, and no coercive or gag clauses in their dealings with their practitioners. They must pay their EP at market value and compensate them for extra effort and special performance. Most importantly, they must provide fair and reasonable entry and exit strategies that apply to all physicians equally.

It certainly is most difficult to be fair and an autocrat. The challenges, the obligations and the temptations must not be underestimated.

## CONCLUSION

In conclusion, *full and pre-defined disclosure on all issues that we discussed is the key to fairness.* Informed EPs can then make a sound choice, knowing what to expect in terms of compensation, job security and input into the group decision-making and leadership process.

And to the contract holder's question above, we would answer that we would always choose democracy over a fair autocracy.

In a democratic practice we at least stand a chance to create the most favorable practice environment, minimizing the burn-out and collateral damage. Partners must provide the effort required to improve or secure their practice conditions. Citizenship requires active participation. It should never be an entitlement. It is a responsibility and a privilege that comes with a maintenance price, with duties and obligations. The practice of EM is difficult. It is also a major achievement that requires years of commitment and delayed gratification. Practicing EPs deserve the chance to enjoy a fair, stable and safe practice environment that promotes career satisfaction and longevity as well as the most optimal care for our patients.

#### ACKNOWLEDGMENT:

James Keaney, MD, FAAEM, & Scott Plantz, MD, FAAEM - Original co-founders of AAEM

#### References:

- 1) United States of America, ex rel. Lance E. Hafter, DO; George R. Schwartz, MD, v. Spectrum Emergency Care, Inc. Appeal from the United States District Court for the District of Kansas (D.C. No. 96-CV-1095-JTM).
- 2) Coastal Healthcare Group, Inc. vs. Dr. George R. Schwartz. Superior Court, County of Durham, North Carolina. Case No. 94-CvS-1539
- 3) Huang D, McNamara R. The AAEM Emergency Medicine Group Survey Results. Common Sense (Resident Section Newsletter), May-June 2003, volume 10, issue 3.
- 4) Glover, RL. Reassignment Rules and the Emergency Physician Staffing Company. [www.aaem.org/regulatoryissues](http://www.aaem.org/regulatoryissues)
- 5) Open Books: HCFA Answers the Contract Companies. [www.aaem.org/openbooks/answer.shtml](http://www.aaem.org/openbooks/answer.shtml)
- 6) McNamara R. Corporate Practice of Medicine: Emergency Medicine and the Physician Practice Management Industry: History, Overview, and Current Problems. [www.aaem.org/corporatepractice/history.shtml](http://www.aaem.org/corporatepractice/history.shtml).
- 7) Morris L. Testimony of Lewis Morris, Assistant Inspector General for Legal Affairs, OIG, before the House Committee on Commerce, Subcommittee on Oversight and Investigations, regarding Medicare and Third-Party Billing Companies. April 2000. [www.hhs.gov/oig/testimony/00406fin](http://www.hhs.gov/oig/testimony/00406fin)
- 8) AAEM Efforts Result in OIG Testimony Before Congress Concerning "Lockbox" Accounts. [www.aaem.org/hcfanews/lockbox.shtml](http://www.aaem.org/hcfanews/lockbox.shtml).
- 9) Moorhead JC, Gallery ME, Hirshkorn C, et al: A Study of the Workforce in Emergency Medicine: 1999. *Ann Emerg Med* 2000;40:3-15.
- 10) Fisher BA, Wittlake WA. Future of the Emergency Physician: subject or citizen? *AJEM* 2000;18:102-7.
- 11) McNamara R. Regulatory Issues: OIG Survey Regarding Staffing Groups in the ED. [www.aaem.org/regulatoryissues/oigsurvey.shtml](http://www.aaem.org/regulatoryissues/oigsurvey.shtml)
- 12) Corporate Practice of Medicine: Federal Judge Decides Against EPBS in Upcoding Trial. [www.aaem.org/corporatepractice/epbs.shtml](http://www.aaem.org/corporatepractice/epbs.shtml).
- 13) Scaletta T. Sharks! Common Sense. [www.aaem.org/commonsense/rules10.shtml](http://www.aaem.org/commonsense/rules10.shtml)

- 14) Dronen S. Letters to the Editor: "As the Screw World Turns." Common Sense. The American Academy of Emergency Medicine. May/June 1999. Vol 6, Issue 3 page 3.
- 15) Keaney J. The Rape of Emergency Medicine. The American Academy of Emergency Medicine. 1992.
- 16) Affiliated Catholic Health Care West vs. Catholic Health Care West. [www.aaem.org/achp/index.shtml](http://www.aaem.org/achp/index.shtml).
- 17) Kazzi AA. "We Told You So!" California Journal of Emergency Medicine. July 2001; volume 2(3): page 27.
- 18) McNamara R. President's Message: "The Screw World of Emergency Medicine." Common Sense. The American Academy of Emergency Medicine volume 6/issue 1 Jan/Feb 1999; p.2.
- 19) Barthel E. Letters to the Editor: The Screw World-A More Complete Picture. Common Sense. The American Academy of Emergency Medicine. May/June 1999. Vol 6, Issue 3 page 4-5.
- 20) Kazzi AA. Letter to the Editor: Job Security for EPs, Corporate Raiding, and the Status of EM as a Specialty. Common Sense. The American Academy of Emergency Medicine. Nov/Dec 1999. Vol 6, issue 6. page 6-7.
- 21) Barthel E. Letter to the Editor: Dr. Bathel responds. Common Sense. The American Academy of Emergency Medicine Nov/Dec 1999. Vol 6, issue 6. page 6-7.
- 22) Kazzi AA. The Corporate Practice of Emergency Medicine: When Exit Strategies rob the future and scavenge the scrubs. California Journal of Emergency Medicine. October 2000; volume 1(2): page 5.
- 23) McNamara R. Surf Mentality for Serfs. Common Sense. The American Academy of Emergency Medicine. [www.aaem.org/commonsense/president0102.shtml](http://www.aaem.org/commonsense/president0102.shtml).
- 24) EM Today. Survey Says ACEP Members Prefer Democratic Groups. EM Today Back Issues. <http://www.acep.org/1,837,0.html>.
- 25) Plantz SH, Kreplick LW, Panacek EA, et al. A national survey of board-certified emergency physicians: quality of care and practice structure issues. *American Journal of Emergency Medicine* 1998;16:1-4.
- 26) Doan-Wiggins L, Zun L, Cooper MA, Meyers DL, Chen EH. Practice Satisfaction, occupational stress, and attrition of emergency physicians. Wellness Task Force. *Academic Emergency Medicine* 1995;2:556-563
- 27) Kazzi et al. Certificate of Compliance with AAEM's Principles of Fairness and Emergency Physician Practice Ownership. Common Sense. The American Academy of Emergency Medicine. [www.aaem.org](http://www.aaem.org).

## Appendix A:

### AAEM VISION STATEMENT:

#### "BLUEPRINT FOR SECURING EMERGENCY MEDICINE'S FUTURE"

##### **Preamble**

Recent declarations in support of the practice rights of Emergency Physicians are a welcomed affirmation of the AAEM Mission statement. The Academy, however, believes such talk falls short of the mark. Specifically, Emergency Medicine must realize that the widespread lack of due process, the standard use of restrictive covenants, and routinely closed books are the symptoms and not the disease. Instead, the cancer in our specialty is our lack of ownership of our practice. High quality patient care will be enhanced by arrangements in which emergency physicians are owners of their practice, not subjects who are employees or independent contractors.

##### **Vision Statement**

The welfare of our patients and the brightest future for Emergency Medicine depend on restoring control of our practice to emergency physicians.

##### **The Principles**

Our motto is "for patients, by physicians." We therefore dedicate the Academy's efforts to the principles listed below. We invite other Emergency Medicine societies and individual emergency physicians to take up this cause.

1. The ideal practice situation in Emergency Medicine affords each physician an equitable ownership stake in the practice. Such ownership entails substantive responsibility to the practice beyond clinical services.
2. Emergency physicians should have control over their professional fees. It is they who earn them by toiling at the bedside.
3. The role of Emergency Medicine management companies should be to help physicians manage their practice. The practice should be owned by and controlled by the physicians and not by a management company.
4. Emergency Medicine state and national professional societies should actively challenge corporate control of Emergency Medicine practice in states with corporate practice of medicine prohibitions, and should seek such prohibition in other states.
5. Emergency Medicine state and national professional societies should condemn and actively oppose forced fee-splitting whereby the emergency physicians are required to give up more than fair market value of

their fees in return for the right to practice in an emergency department. Physicians who force other physicians into such activities should be reported to state medical boards for review.

6. The specialty organizations should cleanse themselves of the influence of medical corporations not adherent to the above principles, by not accepting financial support from these organizations including award sponsorship, research sponsorship, exhibit, and advertising fees.

## Appendix B:

**AAEM POSITION STATEMENT ON *DUE PROCESS*:**  
***Adopted by the AAEM Board of Directors, June 21, 2000***

An emergency physician is entitled to due process upon unilateral termination by his or her employer (or contracting entity) or upon any other adverse action that otherwise affects his or her job security. Due process assumes that the following are property rights of an emergency physician, fundamental to quality patient care and the pursuit of one's livelihood, and should not be forfeited and may not be taken away without reasonable cause and a fair hearing:

- Clinical privileges
- Medical staff membership
- Regular, predictable, and fair shift scheduling

**A fair hearing consists of the following:**

- The interest of patients and the public must be protected in any hearing.
- A hearing body consisting of a physician peer group (and, for Emergency Medicine practice concerns, a consensus of board certified emergency physicians).
- Listing of all charges and objective evidence of reasonable cause.
- Adequate notice of the right to the hearing and of when/where it will take place.
- The opportunity to be present, rebut the evidence, and present a defense.
- Compliance with established rules regarding the extent to which an attorney may participate.
- The hearing body must render a decision based solely on the evidence produced at the hearing.

## Appendix C:

### AAEM POSITION STATEMENT ON *OPEN BOOKS*:

*Adopted by the AAEM Board of Directors, February 28, 2001*

Medicare, Medicaid and many third-party health care insurers expect the individual physician to be aware of what is being billed for services on their behalf. The individual physician can be held liable for fraudulent claims even if the claim was submitted on their behalf by an employer or a billing entity and not personally reviewed by the physician. The American Academy of Emergency Medicine holds forth that all emergency physicians have the right to review all claims for medical services billed on their behalf regardless of their practice situation. It is the policy of the American Academy of Emergency Medicine that no member shall deny another physician access to such information.

## Appendix D:

### REFERENCES TO THE ACEP STATEMENTS ON FAIRNESS:

1. "Emergency Physician Rights and Responsibilities" (Policy # 400284, Approved by the ACEP Board of Directors July 2001). [www.acep.org](http://www.acep.org)
2. "Compensation Arrangements for Emergency Physicians" (Approved by the ACEP Board of Directors April 2002). [www.acep.org](http://www.acep.org)
3. The CAL/ACEP Bill of "Emergency Physician Rights" (Approved by the CAL/ACEP Board of Directors Fall 1999). [www.calacep.org](http://www.calacep.org)





## 49

The Future of  
Emergency Medicine

## RESIDENT AUTHOR:

Tobey Williams, MD (Louisiana State University, New Orleans)

## FACULTY AUTHOR:

Joseph P. Wood, MD, JD, FAAEM, FACEP (Mayo Clinic, Scottsdale, Arizona)

## FACULTY EDITOR:

A. Antoine Kazzi, MD, FAAEM, FACEP (University of California, Irvine)

"The rumors of my demise appear to be over-stated."

Ten years ago, one well-respected healthcare "futurist" predicted a substantial decline in emergency department (ED) visits. This prediction was based on the assumption that the evolution to a managed care system would decrease the need and, through financial disincentives, the accessibility of ED care. However, despite the significant shift from a fee-for-service system (supported by indemnity insurance), to managed care, ED visits have steadily increased. Last year, over 100 million people in the United States visited a hospital ED.

Why have visits to the EDs risen in numbers? Some would say the uninsured and under-served are using the ED for primary care services. While this may explain some of this utilization, it does not explain the *increased* volume since the percentage of the under-insured population today is no greater than it was ten years ago. In reality, the steady increase in ED visits is fueled by three sources: patient convenience, population growth and physician referral. The future of EM is dependent upon our continuing ability to understand and meet the needs of these three *customer* sources.

Politicians and academics have cited the ED or referred to it as an expensive way of providing medical care. The popular notion has favored limiting ED access in favor of primary care clinics as a means of decreasing over-all healthcare cost. Despite this push from above, patients continue to choose ED care because they recognize the value of competent medical care available on a 24-hour basis. While healthcare policy makers compare the charges for an ED visit to charges for similar care in a physician's office, the consumer compares his/her cost of waiting for an appointment, or missing work, to the higher charges incurred by going to the local ED at his/her convenience. Moreover, from the patient's viewpoint, the ED may ultimately be perceived as an efficient means of undergoing a work-up, since one ED visit frequently accomplishes a weeks worth of out-patient diagnostic studies. Finally, data published

by Dr. Robert Williams has shown that while ED *charges* are generally high, the actual *cost* of providing convenience care in the ED is remarkably low.<sup>1</sup>

Physicians are referring patients to the ED at an increasing rate. As a result of the consolidation and "corporatization" of medicine, most primary care physicians are employees or independent contractors of a medical practice rather than owners. With this decentralization of medicine, patients have grown accustomed to several physicians participating in their care, depending on the need to be satisfied. Additionally, cost concerns have shifted medical care from an in-patient to outpatient setting. Almost no single medical decision has a stronger economic impact than the decision to admit a patient to the hospital. Many physicians have recognized the ED as the ideal site for sorting out which patients require admission from those who could be treated as outpatients. The reasons run a gamut and include: the ready availability of diagnostic studies, specialty consultations and parenteral therapeutics; access to qualified acute care at all odd hours; lack of familiarity with an acutely ill patient's history by the cross-covering on-call physician; lack of access to needed medical records; medicolegal concerns or patient complaints associated with deferring a patient's request for prompt medical attention; overbooked and underfunded clinic schedules. Other reasons with a negative undertone include: the managed care related process of "reverse selection" which monitors and potentially penalizes primary care physicians and specialists for ordering outpatient tests. Patients who present to the ED shift the resource utilization they require to another cost center (the ED or the cross-covering admitting physician or specialist). Unfortunately this often means delayed, potentially sicker or frustrated patients. To end this thread on a positive note, one should also state that physicians have become confident and familiar with the specialty of EM and with the relatively predictable practice guidelines used by board-certified EPs. They are confident that their acutely ill patient will receive prompt needed medical screening, treatment and stabilization, using relatively standardized practice guidelines. Private physicians also know the EP's disposition will seek to protect the physician-private patient relationship with limited interference. EPs are expected to admit the patient to his or her private physician or to the appropriate specialty network or to discharge the patient with instructions to follow-up with their private physician.

Approximately 32,000 physicians are working to provide care to the 100 million ED visitors seen annually in US hospitals. A 1997 study by Moorhead *et al*, determined only 52% of these physicians were certified by either the American Board of Emergency Medicine (ABEM) or the American Osteopathic Board of Emergency Medicine (AOBEM).<sup>2</sup> A smaller number of these physicians were residency trained and Board certified. The 1994 Macy Foundation report

stated: "emergency physicians are critically important medical specialists whom many consider to be in short supply."<sup>3</sup>

Academically the specialty is still growing. The first residency programs started in the early 1970s. There are now over 140 approved allopathic and osteopathic programs with a large number of medical schools supporting independent academic departments of EM. Sooner or later, the growth in residency programs will produce the trained physicians needed to staff busy community hospital EDs, and maintain opportunities for EPs interested in pursuing academic careers. EPs are already contributing important research to the body of medicine in areas of cerebral resuscitation, injury prevention, and diagnostic imaging, to name just a few. The number of academic EPs receiving federal grant funding for their research continues to increase.

In summary, there are significant opportunities for residency trained EPs in community and academic centers. The strong future of EM is fueled by the same forces which catalyzed the birth of the specialty. The public has a need for timely, competent, and compassionate care. Referring physicians and healthcare systems need a safety net which will provide an appropriate evaluation and disposition of unscheduled medical problems. Our future will ultimately be shaped by our ability to meet these mandates of our customers.

#### References:

1. Williams RM. The costs of visits to emergency departments. *N Engl J Med.* 1996;334:642-646.
2. Moorhead JC, Gallery ME, Mannle T, et al. A study of the workforce in emergency medicine. *Ann Emerg Med.* 1998;31:595-607.
3. Josiah Macy Jr. Foundation. The role of emergency medicine in the future of American medical care. *Ann Emerg Med.* 1995;25:230-233.

## COMMON ACRONYMS AND ABBREVIATIONS

AACEM	Association of Academic Chairs of Emergency Medicine
AAEM	American Academy of Emergency Medicine
AAEM/RES	American Academy of Emergency Medicine Resident Section
AAMC	Association of American Medical Colleges
AAFP	American Academy of Family Practice
AAPS	American Association of Physician Specialists
ABEM	American Board of Emergency Medicine
ABIM	American Board of Internal Medicine
ABMS	American Board of Medical Specialties
ACEM	Australasian College for Emergency Medicine
ACEP	American College of Emergency Physicians
ACLS	Advanced Cardiac Life Support
ACOE	American College of Osteopathic Emergency Physicians
ACPE	American College of Physician Executives
ACGME	Accreditation Council for Graduate Medical Education
ADEP	Association of Disenfranchised Emergency Physicians
AEP	Association of Emergency Physicians
AHME	Association for Hospital Medical Education
AJEM	American Journal of Emergency Medicine
AMSA	American Medical Student Association
AMWA	American Medical Women's Association
AOA	American Osteopathic Association
AOA	Alpha Omega Alpha (award)
AOBEM	American Osteopathic Board of Emergency Medicine
ASEM	Asian Society for Emergency Medicine
ASEM	Australasian Society for Emergency Medicine
ATLS	Advanced Trauma Life Support
BCEM	Board of Certification in Emergency Medicine
CAEP	Canadian Association of Emergency Physicians
CaJEM	California Journal of Emergency Medicine
CAL/AAEM	California Chapter of the American Academy of Emergency Medicine
CDC	Center for Disease Control and Prevention
CEN	Certified Emergency Nurse
CMA	California Medical Association
CMG	Contract Management Group
CMS	Centers for Medicare and Medicaid Services (formerly Health Care Financing Administration - HCFA)

COGME	Council of Graduate Medical Education
COM	College of Osteopathic Medicine
COMLEX	Comprehensive Osteopathic Medical Licensing Examination
CORD	Council of Emergency Medicine Residency Directors
COT	Commissioned Officer Training
CSA	Clinical Skills Assessment
CT	Computerized Tomography Scanning Unit
DMAT	Disaster Medical Assistance Team
DSO	Designated School Official
EAD Card	Employment Authorization Card
ECFMG	Educational Commission for Foreign Medical Education
ED	Emergency Department
EI	Emergency International
EM	Emergency Medicine
EMCC	Emergency Medicine Continuous Certification
EMRA	Emergency Medicine Residents' Association
EMS	Emergency Medical Services
EMTALA	Emergency Medical Treatment and Active Labor Act
EP	Emergency Physician
ERAS	Electronic Residency Application Service
ETS	Educational Testing Service
EuSEM	European Society for Emergency Medicine
FEMA	Federal Emergency Management Agency
FM	Family Medicine
FMG	Foreign Medical Graduate
FPDC	Federation Physician Data Center
FSMB	Federation of State Medical Boards of the United States
GME	Graduate Medical Education
HCFA	Health Care Financing Administration
HPSP	Health Professional Scholarship Program
ICEM	International Congress on Emergency Medicine
IEM	International Emergency Medicine
IFEM	International Federation for Emergency Medicine
IM	Internal Medicine
IMG	International medical graduate
INS	Immigration and Naturalization Service
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
JEM	Journal of Emergency Medicine
LOR	Letter of Recommendation

MBA	Masters in Business Administration
MED	Mediterranean EM Congress of EuSEM-AAEM
MHA	Masters of Health Administration
MM	Masters in Management
MMM	Masters of Medical Management
MPH	Masters in Public Health
MRI	Magnetic Resonance Imaging Device
MTF	Medical Treatment Facility
NAEMSP	National Association of Emergency Medical Services Physicians
NBME	National Board of Medical Examiners
NMA	National Medical Association
NOLS	National Outdoor Leadership School
NP	Nurse Practitioner
NRMP	National Resident Matching Program
OBC	Officer Basic Course
OB/GYN	Obstetrics/Gynecology
OEMR	Osteopathic Emergency Medicine Residency
OIS	Officer Indoctrination School
OPT	Optional Practical Training
PA	Physician Assistant
PALS	Pediatric Advanced Life Support
PD	Program Director
PECEMMS	Center for International Emergency Management Systems - Netherlands
Peds	Pediatrics
PHS	Public Health Service
PPM	Physician Practice Management Firm
ROL	Rank Order List
ROTC	Reserve Officer Training Corps
RRC	Residency Review Committee
RRC-EM	Residency Review Committee for Emergency Medicine
SAEM	Society for Academic Emergency Medicine
SLOR	Standard Letter of Recommendation
STEM	Society of Teachers of Emergency Medicine
TOEFL	Test of English as a Foreign Language
USDA	United States Department of Agriculture
USMLEä	United States Medical Licensing Exam
USUHS	Uniformed Services University of the Health Sciences
WADEM	World Association for Disaster and Emergency Medicine