

## Who Cares About the 4<sup>th</sup> Year of Medical School?

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Alliance for Clinical Education  
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### Presenters

- Jonathan Carter, M.D. Consortium of Neurology Clerkship Directors  
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- Nadine Katz, M.D. Association of Professors of Obstetrics & Gynecology  
Albert Einstein COM
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Medical College of Georgia
- Shalini Reddy, M.D. Clerkship Directors in Internal Medicine  
University of Chicago
- Brenda Roman, M.D. Association of Directors of Medical Student  
Wright State University Education in Psychiatry
- Joshua Wallenstein, M.D. Clerkship Directors in Emergency Medicine  
Emory University
- **Moderator:**  
Lynn Cleary, M.D. Alliance for Clinical Education



### Objectives

- Discuss different goals for the fourth year
- Identify discipline-specific recommendations for the structure of the senior year
- Discuss/Debate the essential courses or topics for a fourth year curriculum
- Discuss ACE recommendations for fourth year curricula
- Discuss accreditation standards relevant to the fourth year curriculum



### Introduction

- Background from Literature



### Emergency Medicine Recommendations for Senior Year



- Exposure to undifferentiated patients
- Resuscitation & life-saving skills
- Assessment of procedural competency
- Refinement of H&P skills
- Documentation/EMR training & assessment
- "Resident as teacher" curriculum



### What Do Program Directors Want for the 4<sup>th</sup> Year?



- Knowledge
  - Core concepts of acute care medicine
  - "Life threats" for common chief complaints
- Skills
  - H&P
  - Procedural
- Attitude
  - Professional behavior & work ethic
  - Communication and interpersonal skills



### General Skills Expected from Graduates



- Data gathering
- Clinical reasoning and problem solving
- Empathy
- Effective communication with patients, families, and co-workers.
- Time management/efficiency
- Maintaining wellness



### Other Suggestions



- Interdisciplinary team training
- Knowledge of health care systems, financing, and regulation
- Advocacy



### Neurology Recommendations for Senior Year



- Neurology clerkship core curriculum
  - Gelb DJ, Gunderson CH, Henry KA, Kirschner HS, Jozefowicz RF. The neurology clerkship core curriculum. *Neurology* 2002 Mar; 58:849-852
- Exposure to related fields:
  - Ophthalmology
  - Psychiatry
  - Physical Medicine and Rehabilitation
  - Internal Medicine



### What Do Program Directors Want for the 4<sup>th</sup> Year?



- Ability to perform an accurate comprehensive neurologic exam
- Ability to localize the lesion
- Ability to perform "focused" examination in certain circumstances
- Ability to formulate a basic differential diagnosis
- Ability to recognize neurologic emergencies
- Exposure to disciplines that are useful to Neurology (ophthalmology, psychiatry, PM&R)



### General Skills Expected from Graduates



- Details found in Neurology core clerkship document
- Ability to recognize neurologic emergencies
- Ability to perform lumbar punctures
- Ability to perform accurate neurologic exam



### Other Suggestions



- Make neurology clerkship a required clerkship at all medical schools



### Pediatric Recommendations for Senior Year



- COMSEP Curriculum
  - Competencies classified as Universal, Core Pediatric, Mastery
  - Should be moving towards Mastery
- The “undifferentiated” graduate
  - Almost all residents will work with children at some point in residency



### What Do Program Directors Want for the 4<sup>th</sup> Year?



- Commitment to pediatrics
- Strong clinical background
- Objectives as outlined in COMSEP/APPD Pediatric Subinternship Curriculum



### General Skills Expected from Graduates



- Good clinical skills, including laboratory interpretation, radiologic image interpretation
- Ability to communicate/work with children and families
- Intellectual curiosity
- Clinical reasoning



### Current Challenges and Activities



- Loss of 4<sup>th</sup> year for career exploration
- ACGME proposed changes for opportunities for earlier specialization
- Medical schools modifying 4<sup>th</sup> year requirements
- COMSEP, APPD joint meetings
- PEEAC – Pediatric Educational Excellence Across the Continuum



### OB/GYN Recommendations for Senior Year



- Assess acquisition of general knowledge and skills (APGO Objectives)
- Balance the continuum of education and USMLE requirements with ACGME regulations and needs of residencies
- Additional training in Ob-Gyn
  - Sub-Internships in Ob and/or Gyn
  - ‘Boot Camp’
  - Electives



### What Do Program Directors Want for the 4<sup>th</sup> Year?



- Competency assessment of skills and knowledge
- Advanced specialty specific training
- Flexibility with schedule to arrange for hospital certification
- Prepare students for realities and transition to internship



### General Skills Expected from Graduates



- Deliver interns ready to provide quality and safe patient care
- Adequate knowledge base (general medicine and Ob-Gyn)
- Competency in basic history and physical exam skills as well as Ob-Gyn related procedures



### Other Suggestions



- APGO-CREOG Task Force
  - Going beyond the 'boot camp'
  - 4-week introduction to Ob-Gyn residency module
  - Simulation
  - Assessments of competency
- Revise medical school requirements
- Rotating Sub-Internships
- Shorten medical school to allow more time for residency- without extending number of years in training or adding to debt
- Modify residency training



### Family Medicine Recommendations for Senior Year



- 2004 Delphi Survey of Fam Med educators
- Electives suggested
  - Ambulatory family medicine
  - Acting internship (sub-internship)
  - Emergency medicine
  - Dermatology
  - Obstetrics
- First year FM residents added pediatrics

Hueston WJ, Koopman RJ, Chessman AW. A Suggested Fourth-year Curriculum for Medical Students Planning on Entering Family Medicine. *Fam Med* 2004;36(2):118-22.



### What Do Program Directors Want for the 4<sup>th</sup> Year?



- Data gathering
  - Improved interviewing skills with pts & families
- Medical management
  - Handling of undifferentiated problems
  - Managing pediatric problems and wellness
  - Use of point of care databases and EMR
- Procedural skills
  - Pelvic exam
  - ACLS
  - Interpretation of common imaging studies



### General Skills Expected from Graduates



- Survey of first year FM residents recommended the ability to manage the 15 most common reasons for hospitalization
- ACGME Competencies
  - Pt Care:
    - Effective communications with patients & families
    - Informed decisions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
  - Medical Knowledge
  - Interpersonal and Communication Skills

Nevin J, Paulman PM, Stearns JA. A Proposal to Address the Curriculum for the M-4 Medical Student. *Fam Med* 2007;39(1):47-9.




### ACGME Competencies for 4<sup>th</sup> Year (cont.)




- Practice-Based Learning and Improvement
  - Personal role in improving health care outcomes
  - Effectively employ recursive strategy for lifelong learning
- Professionalism
  - Commitment to professional virtues and responsibilities
  - Adherence to ethical principles
  - Sensitivity to context in a diverse patient population
  - Ready for transition from student to resident
- Systems-Based Practice
  - Awareness of impact of health system context on clinical care
  - Function in the practice environment



### Other Suggestions




- Individual schedules should accommodate particular strengths and weaknesses of the student and third year clinical exposures
- I suggest students take advantage of unique clinical opportunities in our city, if they are planning to move for residency
- The majority of first year FM residents surveyed in 2005 reported they did not receive counseling on planning 4<sup>th</sup> year




### Surgery Recommendations for Senior Year



- Surgery
  - General Surgery
  - Neurological Surgery
  - Orthopedics
  - Otolaryngology
  - Urology
  - (Others combined - and vascular)

- The adequacy of preparation of incoming interns - and the quality of the 4<sup>th</sup> year of medical school - have been concerns of surgical educators for over two decades
- "The almost completely elective 4th year of medical school is an educational disaster."  
W.O. Griffen 1987;154:255-60

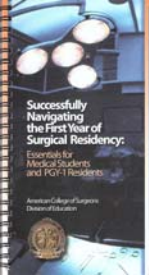



### "Prerequisite Objectives for Graduate Surgical Education: A Study of the Graduate Medical Education Committee of the American College of Surgeons"


J Am Coll Surg 1998;186;50-62

### "Successfully Navigating the First Year of Surgical Residency: Essentials for Medical Students and PGY-1 Residents"


ACS Division of Education 2005


### Essentials for Medical Students



- "Surgical residents entering the first postgraduate year are expected to be well grounded in the scientific basis of surgical diseases and disorders and should be able to apply their knowledge and skills to provide optimum patient care and ensure patient safety"
- (competencies, not courses)




### Essentials for Medical Students




"The essential areas of knowledge and skills... within the context of the core competencies"


- Medical Knowledge and Patient Care
  - Lists specific medical problems and technical skills
- Professionalism
- Interpersonal and Communication skills
- Practice-Based Learning
- Systems-Based Practice




### Online Guide to Choosing A Surgical Residency




- ACS Website
- Value of Electives
  - "the fourth year should be spent learning things you won't get to during residency years ...including anesthesia, radiology, intensive care, pulmonary and cardiology"
- Away electives
  - "Most general surgery programs do not require ...audition electives... However, orthopedic programs do make a strong recommendation that you do take them. Other specialties lie somewhere in between."
  - (Ortho 2 or 3 – Urology not more than 2)



### Surgery Boot Camp The Newest Idea (In addition to Subinternships)



- In recent years "boot camp" rotations have become increasingly popular. Most are 4 weeks long – late in the 4<sup>th</sup> year. In addition to didactics, many include anatomical dissections, lab simulations and technical experiences, nurse pages, , etc. – all designed to help prepare the student to be competent and confident on day one of internship.
- Rebecca Minter's committee working on curriculum for "boot camp")



### Internal Medicine Recommendations for Senior Year



- Review and clinically correlate basic science to clinical medicine
- Translate knowledge into best practice
- Develop analytic and interpretive skills
- Prepare for residency training

Weinberger SE; Smith LG et al. Redesigning Training for Internal Medicine. Annals of Internal Medicine 2006; 144:927-932





### Translated into Educational Content



- Pathophysiology/clinical correlative courses
- Systems based practice
- Quality and safety
- Evidence based medicine
- "at least one high-intensity, pre-residency clinical experience." AKA sub-internship



### What Do Program Directors Want for the 4<sup>th</sup> Year

### General Skills Expected from Graduates



- Knowledge
  - Learning on the fly
  - Systems-based practice
  - General knowledge base
- Skills
  - Time management
  - Understanding health systems
  - Teamwork
  - Efficiency
  - Procedural skills
  - Communication skills
- Attitudes
  - Confidence
  - Work ethic
  - Coping skills
  - Interpersonal skills
  - Prioritization



### General Skills Expected from Graduates



- Clinical skills
- Professionalism
- Basic procedural skills

Langdale LA, Schaad D, Wipf J, et al. "Preparing graduates for the first year of residency: Are medical schools meeting the need? Acad Med. 2003;78:39-44



### Medicine Subinternship Recommendations: 4 Key Competency Areas



- Coordination of care
- Communication skills
- Procedural knowledge and skills
- Information management

Sidlow R, Mechaber AJ, Reddy S, Fagan M, Marantz PR. The Internal Medicine Subinternship: A curriculum needs assessment. Journal of General Internal Medicine 2002; 17:561-4



### Psychiatry Recommendations for Senior Year



- Schools with short (4 week or less) psychiatry clerkships tend to strongly suggest a sub-internship in psychiatry; schools with longer rotations tend suggest taking a psychiatry elective only if undecided or want to explore a sub-specialty (i.e., child)
- "Learn as much medicine as possible", especially endocrinology, cardiology, neurology, dermatology, emergency medicine



### What Do Program Directors Want for the 4<sup>th</sup> Year?



- Demonstrated interest in psychiatry
- Strong desire to learn
- Reasonable academic performance
- Integrity
- Optimism
- Long-standing passion for helping others, with evidence of having done so in the past



### General Skills Expected from Graduates



- Strong patient care skills, especially communication skills
- Life-long learning—being curious about patients
- Collaborative interpersonal skills, with peers and other health care professionals
- Professionalism



### LCME Standards

- ED-15. The curriculum of a medical education program must prepare students to enter any field of graduate medical education...
- ED-17. Educational opportunities must be available in a medical education program in multidisciplinary content areas (e.g., emergency medicine, geriatrics) and in the disciplines that support general medical practice (e.g., diagnostic imaging, clinical pathology).
- ED-18. The curriculum of a medical education program must include elective opportunities to supplement required courses and clerkships



### Common Competencies

- Patient care and management skills
- Data gathering and history/physical skills
- Interpersonal and communication skills
- Clinical reasoning and problem solving skills
- Solid medical knowledge
- Intellectual curiosity
- Empathy



### Concluding Remarks/Questions

Slide presentation is available at  
[www.allianceforclinicaleducation.org](http://www.allianceforclinicaleducation.org)

