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How do the Previous Experiences of Medical Students Relate to When and Why They Choose Emergency Medicine as a Specialty

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Authors

Ray, J
Hopson, L
Burkhardt, J
et al.

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minority of strategies included observation by learners (i.e. residents watching staff perform their duties) or by explicit role-modelling by attendings (i.e. faculty members would take residents around to show them how the job is done).

Conclusions: : Although very few participants noted formal training in the area of task prioritization, both practicing academic physicians and residents were able to describe various methods by which task prioritization skills are informally demonstrated or specifically coached in the clinical environment. More research in this area may be useful in providing both faculty members and residents with useful approaches to acquiring the skill of task prioritization.

33 Holes in the FOAM: An Analysis of Emergency Medicine Residency Curriculum Comprehensiveness Represented in Online Resources

Grock A, Joshi N, Lin M / UCLA Olive View, Sylmar, CA; Stanford University, Stanford, CA; UC San Francisco, San Francisco, CA

Background: Primary literature, textbooks, and didactics compose traditional emergency medicine (EM) resident curricula. Recently, online medical education resources (OMERs), also called Free Open Access Meducation (FOAM), have become available and are utilized increasingly by EM residents. However, no studies have ascertained if there are curriculum gaps in these online resources.

Objectives: We hypothesize that OMERs represent an uneven distribution of topics across the EM curriculum.

Methods: This retrospective analysis compares subject representation in OMERs to that of the American Board of EM's (ABEM) content blueprint for the national qualifying exam.4 Included OMERs were curated from the Academic Life in Emergency Medicine (ALiEM) Approved Instructional Resources (AIR) series, which analyzes and grades online content from the top 50 Social Media Index sites within the previous 12 months following the Council of EM Residency Directors testing schedule. For content areas not yet covered by the AIR series, projected numbers were used following the ABEM content blueprint.

Results: As compared to the ABEM content blueprint, areas that demonstrated a =3% representational difference in online resources were cardiovascular (+10.9%), thoracic/respiratory (+3.0%), HEENT (-3.7%), and hematologic and infectious diseases (-5.5%) as seen in Table 1.

Conclusions: There is a disproportionate amount of attention paid to cardiovascular and thoracic/respiratory topics in the FOAM world. This may be multifactorial, such as having more exciting, procedurally-intensive, and/ or higher acuity topics, appealing to a wider group of authors and learners. Our findings are limited because we

followed the CORD testing schedule, which may not have the same representation priorities as the ABEM content blueprint. Also the AIR series was curated from only the top 50 Social Media Index sites, which may have skewed the distribution of reported OMER content. Our preliminary data showing uneven content distribution and curricular gaps in OMER topics can hopefully help guide the development of future online resources to generate a more comprehensive educational resource for learners.

ABEM Content Blueprint Subject Area	% Representation of ABEM National Qualifying Exam	Corresponding AIR Module(s)	Number of AIR OMER posts	% Representation of AIR OMER posts	% Difference Between ABEM and OMER Content Representation
Cardiovascular	10%	Cardiology 1 & 2 Peripheral Vascular Dx	190	20.9%	10.9%
Traumatic	10%	*Trauma [anticipated]*	91	10.0%	0.0%
Signs, Symptoms, Presentations	9%	n/a	82	9.0%	0.0%
Abdominal/GI	8%	*Abdominal, GI [anticipated]*	73	8.0%	0.0%
Procedures, Skills	8%	n/a	73	8.0%	0.0%
Thoracic/Respiratory	8%	Respiratory 1 & 2	100	11.0%	3.0%
Hematologic + ID	7%	ID/Heme/Onc	14*	1.5%	-5.5%
HEENT	5%	HEENT	12	1.3%	-3.7%
Nervous System	5%	*Neurology [anticipated]*	46	5.0%	0.0%
Toxicology	5%	Toxicology	33	3.6%	-1.4%
Ob/Gyn	4%	Ob/Gyn	15	1.7%	-2.3%
Psychobehavioral	4%	Psychiatry	15	1.7%	-2.3%
Environmental	3%	Environmental 1 & 2	37	4.1%	1.1%
Musculoskeletal (non-traumatic)	3%	n/a	28	3.0%	0.0%
Renal/Urogenital	3%	Genitourinary/Renal	31	3.4%	0.4%
Other	3%	n/a	27	3.0%	0.0%
Endocrine/Metabolic	2%	Endocrinology	15	1.7%	-0.3%
Immune Disorders	2%	n/a	19	2.0%	0.0%
Cutaneous	1%	Cutaneous [anticipated]	9	1.0%	0.0%
TOTALS	100%		909	100.0%	

Table 1. Subject area distribution comparing the ABEM content blueprint and OMERs from the ALiEM AIR series search. Subject areas not covered by the AIR series are in italics, along with their distribution numbers assuming that they matched the ABEM blueprint percentages. The shaded cells respresent and over-representation of OMER content compared to the ABEM blueprint. A full search was not performed for this first AIR Series module, and 14 posts may under-represent the total number for Heme/ID.

34 How do the Previous Experiences of Medical Students Relate to When and Why They Choose Emergency Medicine as a Specialty

Ray J, Hopson L, Burkhardt J, Peterson W, Santen S, White M, Gallahue F, Khandelwal S / Medical College of Wisconsin, Milwaukee, WI; University of Michigan, Ann Arbor, MI; Emory University, Atlanta, GA; University of Washington, Seattle, WA; Ohio State University, Columbus, OH

Background: Little is understood about the factors that influence medical students to choose Emergency Medicine (EM) as their specialty of choice. When these students ultimately make this decision is equally mysterious. The current literature regarding the career selection process has generally focused on the differences between medical students' preferences on income and lifestyle.

Objectives: This study seeks to understand both when medical students make the decision to apply to EM as a

specialty and the experiences that drove them to this specialty.

Methods: An IRB approved cross-sectional survey study of EM bound 4th year medical students was performed. The 8-question survey explored when and why students choose EM as their specialty. The survey was distributed via e-mail the first week of March 2015 to all medical students who applied to an EM residency at 4 programs representing different geographical regions. Statistical Analysis included item description and creation of a multinomial logistic regression using timing of specialty decision as the outcome.

Results: 793/1372 (68%) M4 students responded overall to the survey. Of students who decided on EM, 110 (13.9%) chose prior to Year 3, 399 (50.4%) chose during Year 3, and 282 (35.7%) decided in Year 4 or later. A statistically significant multinomial logistic regression model was fitted (p<.001). Early exposure, presence of an EM residency program, employment in the ED, previous experience as a pre-hospital provide, and completion of a Year 3 clerkship were associated with earlier selection of EM (Table 1). Delayed exposure to EM until year three was associated with later selection of EM.

Conclusions: Early exposure and life experiences were associated with choosing EM earlier in a student's medical school career. The third year was identified as the most common time for definitively choosing the specialty. Directors interested in increasing student selection of EM as a career should focus on bolstering early exposure as well as considering a Year 3 clerkship.

Table 1. Do Medical Students Choose EM sooner based on previous experiences?

VARIABLES	Decided on EM during M3		Decided on EM during M4 or still deciding	
	Relative Risk Ratio	95% Confidence Interval	Relative Risk Ratio	95% Confidence Interval
No affiliated EM residency program at medical school	0.63 (0.16)	0.39 - 1.02	0.56* (0.15)	0.33 - 0.95
When was your first Exposed to EM				
Year 1	0.78 (0.28)	0.39 - 1.57	0.71 (0.28)	0.33 - 1.53
Year 2	1.16 (0.62)	0.4 - 3.30	1.63 (0.91)	0.54 - 4.88
Year 3	11.69* (12.43)	1.46 - 93.91	16.57** (17.74)	2.03 - 135.20
Year 4	0.89 (0.80)	0.15 - 5.16	5.41* (4.58)	1.03 - 28.41
What was your first meaningful EM exposure				
Research	1.25 (0.84)	0.33 - 4.69	0.98 (0.72)	0.24 - 4.09
Employment in ED	0.70 (0.24)	0.36 - 1.36	0.44* (0.18)	0.20 - 0.97
Required Clerkship in EM	2.01 (1.29)	0.58 - 7.04	2.74 (1.77)	0.77 - 9.72
Pre-hospital Provider	0.45* (0.15)	0.24 - 0.85	0.63 (0.22)	0.31 - 1.25
Personal/Family cared for in ED	1.60 (0.94)	0.50 - 5.06	1.68 (1.04)	0.50 - 5.67
Other	0.95 (0.43)	0.40 - 2.30	0.79 (0.39)	0.30 - 2.07
Did have a Year 3 Rotation	1.42 (0.33)	0.90 - 2.23	0.45** (0.12)	0.27 - 0.75

Outcome Comparison is Deciding before M3; Independent Variable Comparison Group is applicant at school with EM program first experience prior to medical school, first meaningful exposure was clinical shadowing; SE in parentheses; ***p<0.001, **p<0.01, *p<0.05; Hosmer-Lemeshow Not significant using deciles, Area under ROC .71.

35 How Emergency Physicians Think: A Cognitive Task Analysis of Task and Patient Prioritization in a Multi-Patient Environment

Chan T, Mercuri M, Van Dewark K, Sherbino J, Linberry M / McMaster University, Hamilton, ON; University of Illinois at Chicago, Chicago, IL

Background: Concurrent management of multiple ill patients is an important skill in emergency medicine, especially in the environment of increasing emergency department (ED) volumes.

Objectives: The objective of this study was to determine a framework for describing how physicians think about prioritization of patients in a multi-patient scenario.

To do this, we conducted a think aloud study utilizing a simulated tracker board scenario (with multiple patient files generated by TMC and KVD) as part of a larger cognitive task analysis study.

Methods: DESIGN - Participants were asked to view and interact with a tracker board with various simulated patients and then prioritize these patients. SETTING - This study was completed at multiple teaching hospitals associated with a major Canadian academic institution between March 2014 and September 2015. PARTICIPANTS - Both experienced physicians (identified via a peer-nomination technique) and junior residents (PGY 1 or 2) were exposed to various tracker board scenarios and asked to think aloud, describing their process for prioritizing the various patients and patient-oriented tasks. ANALYSIS - Using an inductive technique, two investigators (TMC, MM) independently reviewed the transcripts from the think aloud process generating an item-based coding. This coding system was then reviewed collaboratively and used to combine the item-based codes into a cognitive task structure via an iterative process.

Results: 20 physicians (experienced n=10, junior residents n=10) participated in this study. The cognitive task of patient prioritization comprised of three components (Figure 1): 1) Phase 1 - Viewing the entire board to determine an overall strategy; 2) Phase 2 - Creating an archetype from patient-care information available in an initial chart (i.e. vitals, brief clinical history); 3) Creating a Relativistic Prioritization List.

Conclusions: We have generated a cognitive task analysis of how physicians think through prioritizing patients in simulated multi-patient environments. This may inform development of didactic and clinical educational materials.