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at various times during the day (7 AM - 3 PM), evening (3 PM - 11 PM), and night (11 PM - 7 AM) shifts using a cellular phone sound-level monitor app (Decibel X application by Skypaw, Hanoi, Vietnam). A research assistant and two physicians collected a convenience sample of noise measurements in decibels (dB) of a physician charting area over a 36- day period. Monitoring of SO noise measurements occurred within one meter of SO physicians; non-SO noise measurements were made centrally in the charting area. SO data collected also included duration of SO and number of SO patients.

Results: The 358 ambient noise measurements demonstrated that day (66.6 dB ± 3.9, n = 104) and evening (65.3 dB ± 4.7, n= 175) shifts generated more noise than night shifts (57.8 dB ± 8, n = 79; P = 0.05). Background music (BM) in the charting area resulted in higher mean ambient noise levels during physician SO: BM 65.6 dB ± 7.4, n = 14 vs no BM 55.4 dB ± 7.8, n = 65; P < 0.001. Background discussion (BD) in the physicians' charting area resulted in higher mean ambient noise during physician SO: BD 67 dB ± 6.5, n = 23 vs 53.2 dB ± 5.8, n = 55; P < 0.001. Higher decibel volumes correlated with longer SO duration (rho = -0.41; p < 0.001) and higher numbers of SO patients (rho = -0.56; P < 0.001). SO impacted mean ambient noise: SO 60 dB ± 8.7, n = 97 v. non-SO 65.5 dB ± 4.4, n = 261; P < 0.0001.

Conclusion: Time of day, BM, BD, and physician SO impact ambient noise levels in a physician charting area. Higher ambient noise levels correlate with longer physician SO and increased numbers of SO patients.

13 Setting a Minimum Passing Standard for the Uncertainty Communication Checklist Through Patient and Physician Engagement

Salzman D, Rising K, Cameron K, Powell R, Papanagnou D, Doty A, Piserchia K, Latimer L, McGaghie W, McCarthy D / Northwestern University, Feinberg School of Medicine, Chicago, Illinois; Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, Pennsylvania; Northwestern University, Feinberg School of Medicine, Chicago, Illinois

Background: Mastery learning (ML), a form of competency-based medical education, has been successfully implemented to improve clinical skills in a variety of domains. A critical step in ML curriculum creation is establishing a defensible minimum passing standard (MPS) score, which has historically been done by medically-trained experts. As ML expands from procedure-based skills to patient-centered domains, such as communication, there is opportunity to incorporate patients as judges in MPS procedures.

Objectives: To compare physician- and patient-generated MPS scores for a checklist designed to assess physician competency when conducting an emergency department (ED) discharge conversation in the setting of diagnostic uncertainty.

Methods: Emergency medicine residency program directors (PD) were solicited via email, with a goal of recruiting a diverse sample based on both geography and residency program length (three years or four years). English-speaking adult (> 17 years) patients recently discharged from the ED at Northwestern University or Thomas Jefferson University with a non-pathologic discharge diagnosis also were recruited. PDs participated as judges in one of four teleconference calls; patients participated in one of four in-person focus groups. Physicians and patients participated in setting a MPS using the Mastery Angoff method. The MPS for the physician and the patient panels were independently calculated.

Results: Thirteen PDs and 25 patients completed MPS setting procedures. Participant characteristics are reported in Tables 1 and 2. The patient-generated MPS was 84.0% and the physician-generated MPS 88.2%.

Conclusion: With similar instruction, both patients and PDs completed the standard-setting task. The scores set by both groups suggested similar expectations of proficiency for the residents to achieve "mastery." Applying the calculated MPS to the checklist resulted in the patients accepting 18/21 items correct to pass as opposed to the physicians, who had higher expectations of 19/22 items correct. Inclusion of patient perspective is vital for assessing patient-centered care delivery, yet standardized approaches for including patient assessments are limited. Our work suggests a novel and feasible approach for including patients as assessors of resident competency in patient-centered tasks.

Table 1. Program director (PD) demographics.

		N = 13
Age, mean (range), SD		42.8 (36-52) 5.2
Race, N (%)		
	White	11 (84.6)
	Black	1 (7.7)
	Asian	1 (7.7)
Ethnicity, N (%)		
	Hispanic	1 (7.7)
	Non-Hispanic	12 (92.3)
Sex, N (%)		
	Male	5 (38.5)
	Female	8 (61.5)
Training Program PD Attended, N (%)		
	Three-Year	3 (23.0)
	Four-Year	10 (77.0)
Specialty, N (%)*		
	Emergency Medicine	13 (100.0)
	Internal Medicine	1 (7.7)
	Toxicology	1 (7.7)
Training Program PD Directs, N (%)		
	Three-Year	4 (30.8)
	Four-Year	9 (69.2)
# Years in Practice Since Residency, mean (range), SD		13.5 (7-23) 4.9
Hospital Setting		
	Urban	11 (84.6)
	Suburban	2 (15.4)
Hospital Geographic Location		
	Northeast	6 (46.2)
	Midwest	3 (23.1)
	South	2 (15.4)
	West	2 (15.4)

*PDs listed more than one specialty and board certification.

Table 2. Patient demographics.

N = 25	n (%)
Age, mean (SD)	44.8 (19.5)
Race	
White	8 (32.0)
Black	12 (48.0)
Asian	2 (8.0)
Other	2 (8.0)
Ethnicity	
Hispanic	3 (12.0)
Non-Hispanic	22 (88.0)
Female	11 (44.0)
Marital Status	
Married, or In Domestic Partnership	7 (28.0)
Single (Never Married)	15 (60.0)
Widowed	2 (8.0)
Divorced	1 (4.0)
Speaks English as Primary Language	23 (92.0)
Household Size, mean (SD)	2.5* (1.4)
Educational attainment	
Less than High School	1 (4.0)
High school graduate	10 (40.0)
College Degree	10 (40.0)
Post-Grad degree	3 (12.0)
Has Health Insurance	23 (92.0)
Literacy Screening Questions	
"Never" needs help reading medical instructions	10 (40.0)
"Always" feels confident filling out medical forms	10 (40.0)
"Never" has difficult understanding written information from a healthcare provider	10 (40.0)
Health Status	
1 = excellent	1 (4.0)
2 = very good	6 (24.0)
3 = good	9 (36.0)
4 = fair	7 (28.0)
5 = poor	1 (4.0)
Healthcare Utilization, mean (range)	
# of Hospital Admissions	0.7* (0,4)
# of Emergency Department or Urgent Care Visits	1.9* (0,5)
# of Doctor Office Visits	8.0* (0,100)

*At least one participant declined to answer.

14 Sex and Gender Education in Emergency Medicine: A Residency-Based Curricular Audit

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Background: Sex- and gender-based medicine (SGBM) embraces the role that sex (biological designation) and gender (social construct) plays in every aspect of clinical medicine. SGBM, however, tends to be excluded from modern medical education and consequently not routinely integrated into practice. This educational gap is also thought to extend to emergency medicine (EM), a subspecialty uniquely situated at the juncture of a variety of medical disciplines and exceptionally positioned to implement SGBM medicine acutely.

Objectives: To review core EM residency didactic curriculum material for inclusion of SGBM material and, when present, define the type of inclusion.

Methods: A convenience sample of the previous 18-month curriculum from the University of Alabama at Birmingham (UAB) EM Residency Program (July 2016–December 2017) was audited by two independent reviewers for inclusion of SGBM material. "SGBM inclusive" material was then further categorized as pertaining to "patient presentation," "epidemiology," "risk factor," "management/care," and/or "outcome." Academic faculty (25) were solicited for voluntary submission of their didactic material (PowerPoint presentations, slidesets, etc). Oversight and expert review were performed on reviewer discrepancies and provided by a designated "SGBM Task Force Committee," which included an SGBM EM faculty expert.

Results: The majority of faculty members, 22 (88%), submitted 77 lectures (92.7%) for SGBM audit. Roughly half (53%) of applicable lectures included SGBM material. Of the included SGBM data the majority (77%) referred to epidemiology, while fewer lectures mentioned or considered SGBM as it pertained to risk factors (26%), presentation (13%), treatment (8%), or prognosis (5%). Of the nearly half (47%) of applicable lectures that did not include SGBM data, 37% were identified as "missing" relevant SGBM material based upon expert and literature review. The majority (77%) of "missing" SGBM material was EM specific, while a lesser amount, (23%), pertained to medicine in general and was not EM specific.

Conclusion: Despite SGBM's importance as a first step toward personalized medicine, EM residency education is lacking in its inclusion. This creates significant opportunities for increased awareness and expansion of the EM graduate medical education core curriculum with the aim to improve SGBM-based residency education and, ultimately, patient care.
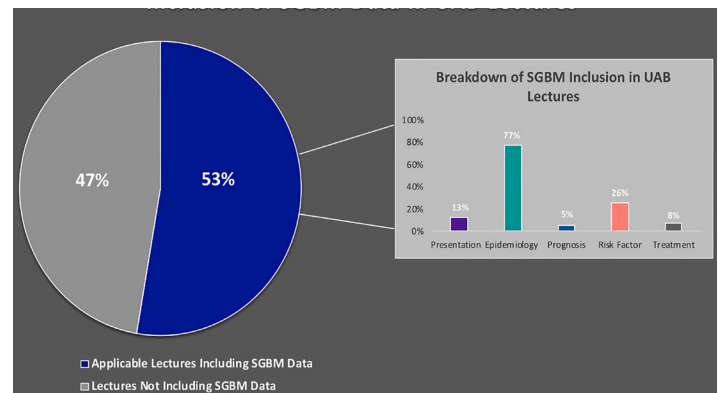

Figure 1. Inclusion of sex- and gender-based medicine (SGBM) data in University of Alabama at Birmingham (UAB) lectures.
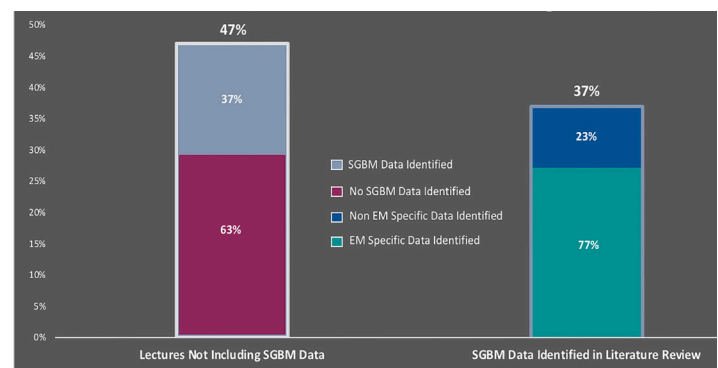

Figure 2. Stratification of University of Alabama at Birmingham (UAB) lectures not including sex-and gender-based medicine (SGBM) data. *EM*, emergency medicine.