

Be aware (and beware) of your biases

Implicit Bias in Pediatric Academic Medicine

Johnson TJ, Ellison AM, Dalembert G, Fowler J, Dhingra M, Shaw K, Ibrahim S. Journal National Medical Association; 109.3 <http://dx.doi.org/10.1016/j.jnma.2017.03.003>

Reviewed by Tyrone D. Layson

What were the study questions?

What are the levels of implicit racial bias among pediatric faculty involved in recruiting and retaining learners and faculties at academic institutions? What are the barriers, facilitators, and perceptions regarding the recruitment and retention of minorities in academic pediatrics from the perspective of those in leadership and recruitment roles?

How was the study done?

Three workshops on the recruitment and retention of minorities in academic pediatrics were conducted at a large academic children's hospital and at a national academic meeting. At these workshops, faculty participants were recruited to complete the Implicit Association Test (IAT) and a survey. The paper IAT is a validated tool that assesses implicit bias and is a timed categorization task that consists of two randomized blocks of trials. For each block, participants are given 20 seconds to categorized names that would more stereotypically represent black or white names, and words that represent pleasant or unpleasant. The IAT was scored using an established scoring procedure, and grouped into standard categories. Sub-analyses of IAT scores were conducted based on groups identified from survey data. Descriptive statistics were used to summarize participant demographic characteristics, job description and work responsibilities, and perceptions about minority recruitment and retention at their institution. Final data was obtained from 58 of 68 eligible faculty who completed both the IAT and the survey.

What were the results?

When stratified by race/ethnicity, non-Hispanic whites had the strongest implicit pro-white/anti-black bias, while non-Hispanic blacks had the lower levels of bias. When stratified by gender, men had stronger implicit pro-white/anti-black bias than women. Most participants personally rated minority recruitment as very important or extremely important. However, only half believed their institution found minority recruitment as very or extremely valuable. Key barriers to successful recruitment and retention of minority physicians included lack of mentors, inadequate resources and poor recruitment efforts were identified.

What are the Implications?

The role of racial bias should be taken into consideration when addressing issues related to minority recruitment and retention. Pediatric leaders and those involved in recruitment should be aware of implicit racial biases they may have against black candidates, students, trainees, and faculty members.

Editor's Note: We live, work and teach in diverse communities with diverse patient populations, and there is immense value of having diversity in healthcare and medical education. This study demonstrates that even those in leadership positions who value recruitment and retention of minorities have implicit bias; awareness of bias is crucial to address this issue. Understanding barriers may also provide opportunities for academic institutions to develop strategies to enhance recruitment and retention of minority learners and faculty. (KFo)

How to succeed in USMLE Step 1 performance? By really trying!

Study Behaviors and USMLE Step 1 Performance: Implications of a Student Self-Directed Parallel Curriculum. Burk-Rafel J, Santen S, Purkiss J. *Academic Medicine* 2017; 92:S67-S74. <http://dx.doi.org/10.1097/ACM.0000000000001916>

Reviewed by Elizabeth Christine Lee

What was the study question?

What are the study behaviors of medical students when preparing for the United States Medical Licensing Examination (USMLE) Step 1, and how do those study behaviors correlate with Step 1 scores?

How was the study done?

A study-behaviors survey was distributed to all medical students who completed their first Step 1 attempt in 2014 or 2015 at University of Michigan Medical School, which used a systems-based two-year pass/fail preclinical curriculum that did not overtly emphasize Step 1 preparation at the time of this study. The survey requested information about students' Step 1 study timing, study resources, and score goal. Data was also collected on participants' preclinical performance, Step 1 performance and demographic variables.

What were the results?

Among 332 medical students, 274 (82.5%) participated in the survey. Most respondents (n=211; 77.0%) reported studying for Step 1 prior to the dedicated Step 1 study period. During the study period, students studied on average 11.0 hours per day. A minority of students (n=49; 17.9%) reviewed school coursework to prepare for Step 1. Students predominantly used third-party Step 1 resources, with more than 99% of students using *First Aid* review book and UWorld question bank. Students reported reading the review book an average of 2.1 times and completing on average 3,597 practice questions. Study behaviors that positively correlated with Step 1 scores included: earlier study (4.2-point score increase), increased review book usage (2.3-point increase with each review book reading), and greater completion of new practice questions (1.0-point increase with completion of every 286 new questions).

What are the implications of these findings?

The correlation between earlier Step 1 study and improved Step 1 score outcomes had not yet been previously described. More work is needed to explore the feasibility and appropriateness of incorporation of third-party Step 1 resources into the core preclinical curriculum. Considering the increasingly Step 1-reliant residency application process, the authors suggest that alignment of the preclinical curriculum with Step 1 study may yield benefits but should also be balanced against overemphasizing Step 1 as a meaningful indication of overall trainee quality, as Step 1 scores have shown to be poorly correlated with resident clinical skills. Future studies can be aimed at assessing the relationship between Step 1 study behaviors, score outcomes, and performance in core clinical clerkships.

Editor's Note: Student performance on Step 1 is a skill like any other, so it shouldn't be surprising that more practice with that skill (or reasonable surrogates) will improve performance. Just imagine if we could motivate students to practice that much for other skills that we care about during medical school! (JG)

Better preparing our students to be teachers

Development and Implementation of a Longitudinal Students as Teachers Program: Participant Satisfaction and Implications for Medical Student Teaching and Learning. Yeung C, Friesen F, Farr S, Law M, Albert L. *BMC Medical Education* 2017; 17:28.
<http://dx.DOI.org/10.1186/s12909-017-0857-8>

Reviewed by Maya Neely

What was the study question?

Can a longitudinal Students as Teachers (SAT) program improve medical students' teaching and communication skills, and equip them with improved learning strategies?

How was the study done?

A 7 month longitudinal SAT program offering instruction in educational theory and practical teaching strategies as well as observed teaching sessions with feedback was created at the University of Toronto and completed by 18 second year medical students. Questionnaires on skill level and teaching confidence were completed both before and after the program. A smaller cohort participated in a group interview to capture more descriptive responses.

What were the results?

Students expressed a high degree of satisfaction with the program structure, especially the educational modules and practical teaching sessions. Participants' confidence in their teaching skills, self-perceived teaching and communication skills, and ability to engage in feedback all increased significantly. Three major themes were noted during small group interviews: 1. Most students felt that the SAT program provided them with a basic "toolkit" giving them strategies on how to teach effectively in various settings. 2. Students felt that a longitudinal program allowed for time to both receive feedback and reflect on current practices to improve teaching. 3. The SAT program equipped students with improved learning strategies.

What are the implications of the study?

As we continue to recognize the importance of preparing students to be strong teachers, this study provides us with helpful information on development of a curriculum that was well-received and felt to be effective. Providing students with a robust teaching curriculum and opportunities for teaching in various settings will help students develop both their teaching and learning skills early and continue to build upon them as both residents and physicians.

Editor's note: Studies of SAT programs usually involve 3rd and 4th year students in which participants are exempt from clinical responsibilities. This SAT program was extracurricular for pre-clinical students and was deemed more feasible in already crowded medical school curricula. Early exposure to such a SAT program emphasized improved learning skills as well as teaching skills for the participants. (RR)

How good are those electronic inpatient progress notes?

Promoting Responsible Electronic Documentation: Validity Evidence for a Checklist to Assess Progress Notes in the Electronic Health Record. Bierman JA, Hufmeyer KH, Liss DT, Weaver AC, Heiman HL. *Teaching and Learning in Medicine* 2017; 29(4):420-432.

<https://doi.org/10.1080/10401334.2017.1303385>

Reviewed by Fatima Ali

What was the study question?

Can a concise and valid instrument be developed to assess the quality of electronic health record (EHR) inpatient progress notes?

How was the study done?

An instrument to evaluate EHR inpatient progress notes was created based on literature and local expert reviews followed by refinement involving faculty focus groups. Four evaluators used the assessment tool to review 100 randomly selected inpatient progress notes written by 44 internal medicine PGY1 residents. The notes were evaluated for quality and to measure interrater reliability. The progress notes had to be written by the same PGY1 resident on at least 2 consecutive days.

What were the results?

An 18-item assessment tool-ten yes/no and eight items with three response options and four items with open ended questions called the Responsible Electronic Documentation (RED) checklist- evaluating content, internal structure and response process was developed with substantial interrater reliability and statistical internal structure and content validation. The checklist can be completed within 10 minutes.

This checklist is thought to be practical and suitable for assessment of documentation competency of trainees.

What are the implication of these findings?

A third checklist for the evaluation of electronic medical records progress notes (the other two being Physician Documentation Quality Instrument and QNOTE) appears to be time efficient and specific to inpatient progress notes. However, the checklist has been developed and evaluated at one institution with one specialty, and one type of EHR. Further work needs to be done before it can be used broadly to evaluate quality and validity of trainees EHR progress notes.

Editor's Note: Probably the most important caveat to be considered regarding the implications of the usefulness of these results is that it involved one type of EHR. (RR)