

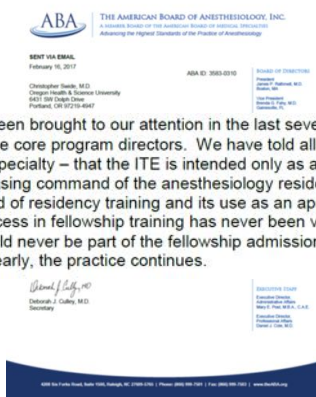
Standardized tests as screening tools: Who we lose

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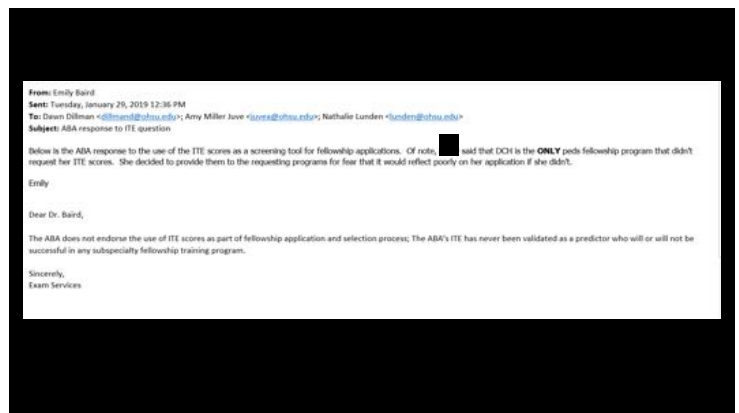
No disclosures

Objective:

Articulate the potential impact of using standardized test scores as a screening tool for fellowship applicants



The issue has been brought to our attention in the last several years during our meetings with the core program directors. We have told all our program directors – core and subspecialty – that the ITE is intended only as a measure of the resident's increasing command of the anesthesiology residency curriculum over the 4-year period of residency training and its use as an appropriate marker of likely future success in fellowship training has never been validated; therefore, ITE scores should never be part of the fellowship admissions decision making process. But clearly, the practice continues.



Primary Purpose

An examinee's USMLE scores are reported to medical licensing authorities for their use in the decision to grant a provisional license to practice in a post-graduate training program and the decision to grant an initial license for the independent practice of medicine. This is the primary intended purpose of USMLE scores.

Secondary Purposes

Trends in medical education have increased examinee efforts to maximize their USMLE performance as demonstrated through the numeric score. These trends include limited residency training slots, particularly in certain specialties, as well as medical schools' adoption of pass/fail grading for foundational curricula. Because residency programs use USMLE scores as a means to screen and select applicants, examinees strive to obtain the highest possible scores.

This use of the score is considered a secondary use of USMLE scores. USMLE was not designed for these purposes and the program did not envision the markedly increased reliance on numeric scores in graduate medical education. Program directors acknowledge the limitations of using USMLE scores for residency selection, but justify the practice given USMLE's position as a nationally standardized measure of knowledge and skills and as the only common metric by which to evaluate all applicants.





Unintended Consequences

- Significant difference in mean scores between URM and non-URM (ABA Part 1) (Kim et al, 2012)
- Females, underrepresented minorities, applicants over the age of 30 (USMLE Step 1) (Fernandez et al, 2019)
- ITE transitions to a high stake exam = focus on “passing an exam”

JAMA Internal Medicine | Original Investigation

Comparison of Hospital Mortality and Readmission Rates for Medicare Patients Treated by Male vs Female Physicians

Yusuke Tsugawa, MD, MPH, PhD; Anupam B. Jena, MD, PhD; Jose F. Figueroa, MD, MPH; E. John Orav, PhD; Daniel M. Blumenthal, MD, MBA; Ashish K. Jha, MD, MPH

Patients treated by female internists have lower mortality and readmissions compared with those cared for by male internists.



GETTY IMAGES

Journal of Racial and Ethnic Health Disparities
October 2019, Volume 6, Issue 5, pp 1011-1020 | Cite as

The Impact of Patient-Provider Race/Ethnicity Concordance on Provider Visits: Updated Evidence from the Medical Expenditure Panel Survey

Authors Authors and affiliations

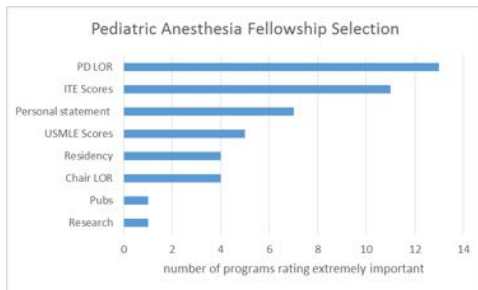
Alyson Ma, Alison Sanchez, Mindy Ma

There is an association between race/ethnicity concordance and the likelihood of patients visiting their provider. Study results demonstrate that racial disparities in health care utilization may be partially explained by race/ethnicity concordance.

Not surprising....

Standardized test scores best predict
other standardized test scores
(vs. clinical performance)

Results from the 2018 NRMP Program Director Survey



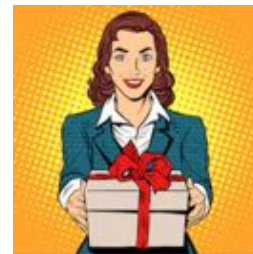
In-training examinations are predictive of written board exam scores

BUT

The oral exam was developed to measure attributes that cannot be assessed by written exam

Interesting....

- Correlation between resident ranking and subsequent performance is low/poor (in training) or unrelated (in practice)
- Commonly used ranking criteria does not accurately predict poor performers
- Resident personality type correlates with faculty assessment of performance (vs USMLE) and high competency
- Clinical skills (determined by a program director assessment) were associated with higher odds of becoming board certified in anesthesiology
- Program director ratings of graduating residents' clinical competence were also related to board certification rates in internal medicine



Our future learners...

- Are enrolled in schools where standardized exams are not a part of, or are deemphasized, in the selection process
- Are advocating for a level playing field free from bias
- Will be in medical school at a time when the USMLE is P/NP (InCUS)

- H. Hamdy, K. Frazee, M. B. Anderson, et al. BEME systematic review: Predictive values of measurements obtained in medical schools and future performance in medical practice Med Teach, 28 (2006), pp. 303-316
- H. Shoh, N. Nusgipchen, I. Benstock The utility of letters of recommendation in predicting resident success: Can the ACME competencies help? J Grad Med Educ, 3 (2011), pp. 387-390
- S. Adavumilli, R.H. Coban, K.W. Marshak, et al. How well does applicant rank order predict subsequent performance during radiology residency? Acad Radiol, 7 (2002), pp. 635-640
- H. Hamdy, K. Frazee, M. B. Anderson, et al. BEME systematic review: Predictive values of measurements obtained in medical schools and future performance in medical practice Med Teach, 28 (2006), pp. 303-316
- S.M. Bonawit, F. T. Saubury, W.G. Wilson Information collected during the residency match process does not predict clinical performance Arch Pediatr Adolesc Med, 154 (2000), pp. 256-260
- Gelman A, Zuckerman B, Benoit D, Grady G, Calla P, Durham S. United States Medical Licensing Exam Step 3 score as a predictor of neurosurgical career beyond residency Neurosurgery, 2018;0:1-7.
- T.E. Brothers, S. Wetherholt Importance of the faculty interview during the resident application process J Surg Educ, 64 (2007), pp. 378-385
- J.G. Bell, L. Kanehisa, L. Shaffer Selection of obstetrics and gynecology residents on the basis of medical school performance Am J Obstet Gynecol, 186 (2002), pp. 3091-3094
- Zuckerman S, Kelly PD, Orsini MC, Hootman D, Vempy Saha AN, Magallon JB, Battistoni RE, Zuckman ED, Solomon GS, Wellens JC II. Predicting resident performance from pre-residency factors: A systematic review and meta-analysis of neurosurgical training. World Neurosurgery, 2020;126:495-505
- S. Adavumilli, R.H. Coban, K.W. Marshak, et al. How well does applicant rank order predict subsequent performance during radiology residency? Acad Radiol, 7 (2002), pp. 635-640
- H. Hamdy, K. Frazee, M. B. Anderson, et al. BEME systematic review: Predictive values of measurements obtained in medical schools and future performance in medical practice Med Teach, 28 (2006), pp. 303-316
- S.M. Bonawit, F. T. Saubury, W.G. Wilson Information collected during the residency match process does not predict clinical performance Arch Pediatr Adolesc Med, 154 (2000), pp. 256-260
- K.L. Hoffmann, M.J. Zwaan Can performance in medical school predict performance in residency? A compilation and review of comparative studies J Am Acad Dermatol, 65 (2011), pp. 1010-1022
- Fryer JP, Corcoran R, Georger, Wang J, Darke A. Does resident ranking during recruitment accurately predict subsequent performance as a surgical resident? Journal of Surgical Education, 2012;0(0):724-30
- Schell, Kendall M, et al. "Anesthesiology resident personality type correlates with faculty assessment of resident performance." Journal of clinical anesthesia 24.7 (2012): 566-572.
- D.E. Martin, J.J. Tobias, S.M. Hsieh, A.L. Williams The resident application process and its correlation to future performance as a resident Anesth Analg, 100 (2005), pp. 503-505. DOI:10.1016/j.ajaa.2005.04.013.47336.59
- Liu J, Marlo S, Alexander S, Makrenski (2020) Personality testing may improve resident selection in anesthesiology programs, Medical Teacher, 42.12, e552-e554. DOI: 10.1080/01443993.2020.1903093
- Skeloff S, Hughes FP, Hug CC Jr, Longnecker DE, Saldman LA demonstration of validity for certification by the American Board of Anesthesiology Acad Med 1994;69:7406
- Norcini G, Grossi L, Shea JA, Webster GD The relationship between features of residency training and ABIM certifying examination performance J Gen Intern Med 2005;20:3306