

Virtual Mentor
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FROM THE EDITOR

On Choosing the “Perfect” Doctor

From a program director:

“...she would be a minority woman who graduated from Harvard Medical School at the top of her class, got honors in all her required third-year clinical rotations, had been elected to AOA, had a PhD with a record of significant research and funding, scored in the 99th percentile on USMLE Steps 1 and 2, acquired superior reference letters from top colleagues in our specialty with whom she had worked closely and who said they wanted her in their program, had a dynamite personality, and had the energy of a thirteen-year-old.”

Iserson’s Guide to Getting Into a Residency, 5th edition [1]

For many years in American medical education admissions, medical schools and residency programs nationwide found their candidates by looking for certain concrete, measurable qualities: academic achievement on a standardized level, volunteer and other clinical experience, and professional and educational leadership. More recently, admissions committees and governing bodies such as the Association of American Medical Colleges have made attempts at both the medical school and residency level to assess candidates more holistically, looking for qualitative aspects of character, such as empathy, emotional intelligence, and values. In this issue of *Virtual Mentor*, we seek to address the many ways in which medical school and residency program admissions policies are moving toward a more holistic process. In doing so, we explore some pitfalls of these new systems as well as old problems that have not yet been corrected.

Schools have also been actively making shifts to seek out not only racial diversity but more recently, students from more economically diverse backgrounds. Indeed, the collective body of physicians in training has drastically changed in a short period of time, as elucidated in this month’s medical narrative by Samuel Shem, MD, PhD.

The motivations for the recent paradigm shift in admissions are wide-ranging and can be interrogated from both “student-centered” and “society-centered” perspectives. Medical schools and residency programs have control over admissions, and, while it could be argued that the annual residency match results continue to show a decrease in the number of primary care physicians in training, it also may be thought unwise to stifle student autonomy, passion, and commitment to a chosen field. We know that, for decades, medical schools sought out an archetypal student, one who excelled academically. Not much emphasis was put on seeking those with difficult-to-measure but equally important aspects of character that are imperative for good patient relationships and communication. Perpetuation of medical school

culture that existed for so long now appears to be incompatible with community health imperatives and the need for cultural understanding in medicine.

Moreover, ethics and professionalism are well-accepted standards, and instruction in these values has been included in the formal curriculum of medical schools for quite some time. Yet the prevalence of professional violations, including cheating and substance abuse, in medical student populations is still overwhelming and may not be affected by formal ethics teaching, suggesting that a well-defined, clear standard of conduct and level of conviction may need to be directly sought in candidates during the admissions process.

From a populations standpoint, the percentage of students coming from medical families is rising in medical schools nationally and globally, despite most schools' increasing search for students from diverse backgrounds. Likewise, students from medical families have, in the limited literature, been shown to be more likely to enter competitive specialties, and their choices of specialty are easier to predict, which may indicate informed interest. Having parents from a medical background may confer distinct advantages to students by molding or directing their interests and informing them about securing admission to medical school, successfully completing it, and becoming a better doctor. But overselection from this group may lead to homogeneity in the physician population and may increase barriers to entry for first-generation medical students. This phenomenon is addressed in a case discussion in this month's *Virtual Mentor* by Norma E. Wagoner, PhD, and Carol L. Elam, EdD.

Several challenges have been posed to the changes in the goals of medical school admissions and means of achieving them. Since efforts to diversify the ethnic and racial backgrounds of medical students began more than 40 years ago, the U.S. Supreme Court has heard two cases brought by students who thought that a school's preference for diversity in the class cohort caused their rejection. Valarie Blake, JD, MA, reviews those cases in her health law article.

As more in-depth testing on personality and ethics knowledge have been introduced on a regional and national level, questions have been raised about the standardization, replicability, and statistical validation of such tests, as well as the concern that they might suppress, rather than promote, diversity. This question is taken up in two commentaries—one by Asher Tulskey, MD, and another by Matthew J. Zirwas, MD, and Julie M. Aultman, PhD—on the ethical use of personality testing and behavioral-based interviewing (BBI) during residency admissions.

While progress has been made in creating an ethical admissions process, some flaws remain. Again, many of them concern the degree of variability among medical schools' methods of evaluating students, a process that has huge implications for a student's professional development and career path. Two evaluation tools, the letter of recommendation and the medical school performance evaluation (MSPE), and the potential biases and hazards associated with these tools, are discussed by Rick D. Axelson, MD, and Kristi J. Ferguson, MSW, PhD, in their state of the art and science

article and by Marianne M. Green, MD, John X. Thomas, MD, and Sandra M. Sanguino, MD, in their op-ed. In their journal discussion, third-year medical students Kevin McMullen, Matthew Janko, and Kelley Wittbold question the findings of a study published in 2011 that concluded that the genders of MSPE authors and the students they were writing about did not affect ranking decisions.

The current system of residency admissions is also open to the charge that it creates incentives for students to compromise their ethics for the sake of succeeding in the match, for instance revealing their rank list ahead of time or accepting positions “under the table.” This sort of deception undermines the fairness and anonymity of the match, which in theory should allow for improved student outcomes. Jennifer A. Sbicca, MD, Katherine Gordon, MD, and Stefani Takahashi, MD, engage this topic in a case commentary, as does Justin List, MD, whose medicine and society article investigates whether medical education admissions policies work against the very sorts of candidates they wish to find.

This issue of *Virtual Mentor* also looks ahead to expected changes in admissions and what effects these may have on future medical students and residents, be they traditional applicants or otherwise. For instance, the National Resident Matching Program (NRMP) will this year introduce its “all-in” policy, under which residency programs that participate in the match will not be permitted to take any candidates whatsoever from outside of it. The implications of this are discussed in the policy forum article by Jennifer Saultz, MD, and Nathan Wright, MD. And, in another state of the art and science article, Erik Porfeli, PhD, and I explain a new instrument designed to gain insight into a student’s ultimate career outcome by assessing both inventoried and expressed interests.

This changing emphasis in assessment of personality and interests is not universal. In the interest of an outside look at our system, Andreia Martins Martinho surveys European systems of admissions in her medical education article.

Finally, we affirm that academic excellence and strong qualitative personality traits are not dichotomous and should not be addressed as such. Admissions standards can be modified to identify students with a reasonable degree of both, which can serve to help medical education become aligned with society’s needs while also applying an appropriate degree of rigor to admit the best and brightest students. As Geoff Norman writes, “The solution does not come from de-emphasizing marks, but from developing better measures of other characteristics that are equally important, but poorly measured” [2].

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ETHICS CASES

National Resident Matching Program Violations

Commentary by Jennifer A. Sbicca, MD, Katherine Gordon, MD, and Stefani Takahashi, MD

Violet, a medical student from a top-tier medical school who hopes to match into a residency in dermatology, is currently on the interview trail. She goes to her third interview at a program near her school, feeling confident and satisfied with her performance so far. The program director, a nationally renowned figure in the specialty, tells her that she is “ranked to match” by the program and asks what her rank list is. Violet responds that, while she had a great experience at the program that day, it was too early in the season to tell what her actual rank list would be, but that she would keep in close correspondence with the program.

When discussing this situation in an online forum with some fellow students interested in matching in the same specialty, Violet hears of some students being accepted to NRMP programs outside of the proper match protocol. She tells the next program she interviews with that she is ranking them first despite the interviews she still has coming up, reasoning that this is the only way to optimize her chances of matching in the specialty if the interviewees insist on asking about her rank list.

Commentary

In their last year of medical school, graduating medical students participate in “the match,” a system dedicated to pairing newly minted doctors with their first jobs as resident physicians. After applications and interviews, the match program requires students to make a list and rank in order the programs they would like to attend and requires the programs to do the same for applicants. Regardless of any promises made by programs or applicants, the match relies on a computer algorithm administered by the nonprofit National Resident Matching Program (NRMP), which takes the rank ordered lists submitted online by medical students and programs and matches each medical student with a position in the resident training program that holds the highest possible rank on his or her list.

Before the match program was in place, a medical student applying to a competitive specialty was likely to take one of the first spots offered to him or her, even if interviews at more desirable programs were in the future, to ensure a spot in his or her desired field. The NRMP system was created so medical students could interview at a maximum number of programs and not be forced to commit to a program early in the process, an especial temptation in competitive specialties like dermatology, radiation oncology, neurosurgery, plastic surgery, and orthopedic surgery [1].

Striving for fairness and integrity in the match, the NRMP has specific rules for applicants and programs during the application and interview process, and violations reported to the NRMP have repercussions, for example the barring of a program or applicant from participating in the match for a set amount of time. The cardinal rule of the match is that programs and applicants cannot ask the other how they will be ranked; the NRMP firmly states that “applicants and program directors may express their interest in each other; however, they shall not solicit verbal or written statements implying a commitment” [2]. The personal experiences of the authors and numerous published studies about both competitive and noncompetitive matches demonstrate that match violations and situations with compromised integrity are common and underreported [1, 3-9]. Programs and applicants mislead each other frequently.

What this vignette describes is a medical student applying for a highly competitive specialty, being asked a question that breaks the rules of the NRMP, and then lying to subsequent programs during the interview process about how she intends to rank these programs. The program director’s asking the applicant how she intends to rank programs was breaking one of the cardinal rules of the NRMP. However, because the rules and regulations of the NRMP state applicants and programs are allowed to freely express their interest in each other, the student’s actions do not break the rules. She is allowed to express unbounded interest in all programs—she can even tell them all she will rank them number one—and then submit her rank list with the programs numbered however she chooses. Her behavior is unprofessional, but does it break the rules of the NRMP? No.

Is it unethical? Maybe. The applicant is knowingly lying to programs, most likely with the goal of ensuring she matches. This is a relevant scenario, given that 12-14 percent of applicants to dermatology were asked by a program how they intended to rank that program and 31-32 percent of all respondents felt pressured to tell programs how they ranked them [3].

What if this case described the reverse: a program that told more applicants than they had slots for that they would be “ranked to match”? Is the program at greater fault than the applicant? Possibly, as programs are in the position of power and control access to the few resident positions. In a competitive specialty, it is hard to imagine a scenario in which a program could not fill its positions. Candidates, on the other hand, have a 30 percent chance of not matching in competitive specialties like dermatology [3], and, if a candidate does not match, he or she may have to choose another specialty. In light of this unbalanced power dynamic, one can understand how the applicant in this situation could justify this unprofessional behavior to herself. The match allows programs and applicants to express interest in each other, genuine or not, and to rank each other without any restrictions. With guaranteed anonymity and so much at stake, it is hard for programs and applicants to maintain integrity.

Although the NRMP algorithm favors the applicant by assuring each applicant his or her highest possible match, one study showed that 18.6 percent of surveyed medical students reported feeling assured by a program that they would match there but then did not, despite ranking that program first [9]. Applicants should be educated by their advisors to not create their rank lists based on match courtship letters or phone calls. The applicant maximizes his or her advantage when he or she ranks programs in order of true preference.

We think that much of the ethically ambiguous promising between applicants and programs occurs after the interview [1, 3]. Of 564 surveyed medical students, 86.4 percent reportedly communicated with programs after their interview, 59.9 percent reportedly told more than one program they would rank it highly, and 1.1 percent reportedly told more than one they would rank it first [9]. A limit on communication between programs and applicants after the interview may help improve the integrity of the match. However, we don't think applicants and programs should be prohibited from communicating at all, for applicants often have questions for the program after interview day, answers to which will help make their final decision. Our ideas for ways to limit communication to improve the integrity of the match are:

1. Programs could restrict post-interview contact to one person after the interview day, a program assistant, not an MD involved in the process, who will answer all of the applicant's questions and mediate questions for other people.
2. Programs could refuse to communicate with all applicants until they have finalized their rank lists.
3. The program could commit to calling each applicant before or after rank lists are due. It would be important to tell applicants that these conversations will not affect their rankings. This approach would most likely be difficult for larger specialties that interview many applicants but could work for the smaller, more competitive specialties.
4. Smaller programs could interview all applicants on one day and tell the applicants as a group after the interview day is completed that the rank list will be decided on the interview day, or within the next couple of days, and that after this process they welcome questions and correspondence from applicants.
5. Programs and applicants could be restricted from communicating after interview day except through a limited number of standardized "I have interest in you" messages sent and received through the NRMP website before rank lists are due. The messages would be noncommittal but would indicate interest. Perhaps applicants could have 2 or 3 such messages available for them to use, and each program could have 1 or 2 messages per resident position.

Some match violations occur because faculty members are unaware of the rules and regulations of the NRMP. The NRMP could develop two training videos as compliance tools, one for faculty members and one for applicants, to review the most pertinent rules of the match. The videos could be short (3 to 5 minutes), and faculty

members could be required to view the video and answer three simple questions before interviewing applicants. Applicants could be required to watch the video and answer three simple questions in order to submit their applications.

There's no perfect way to regulate the match process, and both applicants and programs are highly motivated to act in their own self-interest. Just like other job application processes, favoritism, nepotism, and self-interest will never be controlled, and there will inevitably be ethical grey areas. If programs ask applicants to reveal their rank lists, applicants have a choice: evade the comment like our applicant did in the scenario above, lie to gain a perceived advantage, or tell the truth. No matter how applicants choose to respond, they can also report inappropriate behaviors to the NRMP. The NRMP will take sanction against reported programs, which could include the program's being barred from the match for the upcoming year. Unfortunately, most competitive specialties are small and interview few people, and it is hard to imagine an applicant's anonymity being maintained during the reporting process. It is with this grain of salt that match applicants must weigh the pros and cons of their communications with programs, faculty members, and their future colleagues while trying to maintain the utmost integrity. Our advice to applicants is not to let programs' communications sway them to rank that program higher or lower but, ultimately, to rank programs based on true interest.

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ETHICS CASES

Personality Testing in Resident Selection

Commentary by Asher Tulsky, MD, Julie M. Aultman, PhD, and
Matthew J. Zirwas, MD

Brent, a fourth-year medical student applying to residencies in internal medicine, has worked diligently during medical school, achieving high grades, garnering commendations for empathic bedside care, assuming leadership positions in several organizations, and volunteering in underserved care programs. He is a competitive applicant for the specialty and has already received a number of interview requests. His first interview is at a small, exclusive, but well-known program, and Brent is feeling nervous but excited after having achieved what he had thought was his best.

After the program director introduces himself and the program, a personality test is administered to all of the applicants. Brent begins to feel apprehensive; why is this test being administered? He is worried that his chance of matching at such a program could be ruined if he doesn't give the "right" answers to these questions that, as far as he can tell, aren't even pertinent to medicine. Brent's discomfort about the personality test rattles him to the point that it affects his mood and candor during the interview.

Upon returning home, Brent and his classmates discuss what they have encountered on the interview trail, from colorful interviewers to student faux pas. He tells them about the personality test: "I don't see the importance of this personality test. Shouldn't my application speak for itself? It makes me so mad that I might not match there because of how I did on some ridiculous personality test. Seriously, were they interviewing me to see if I'd make a good doctor, or to see if they wanted to date me?"

Commentary 1

by Asher Tulsky, MD

In this scenario, Brent, a fourth-year medical student, is confronted with an unanticipated request to complete a personality inventory as a part of his interview day for a residency position. Fearing that a ten-item personality "test" may undermine his acceptance into a program that, based on his application, he is well qualified for, he laments that the interview questions should be sufficient. Unfortunately, as any program director will attest, the typical interview process is not all that effective in consistently finding the best fit.

Generally, applicants' medical knowledge and patient care skills are well addressed in their clerkship performance and USLME scores, both generally well summarized

in the medical student performance evaluation (MSPE) provided by the dean of students' office. Much more difficult to determine are a student's noncognitive qualities, such as conflict management, communication with ancillary staff, and professionalism. While clerkship grades are assumed to include an assessment of these attributes and some medical schools now provide a separate professionalism summary, these are difficult skills to assess well without specific training and focused attention. The halo effect, or the influence of one aspect of performance on the grading of others, undermines the validity of such ratings.

Does it make sense to even try to assess these characteristics of applicants? Grades and standardized test scores should in theory be sufficient to identify qualified and competent applicants, and certainly meeting with faculty and residents during the interview process should reveal most serious potential problems. The value of data from these sources in predicting performance, however, is modest [1, 2]. Further, the medical education literature suggests that a significant minority of residents have serious problems during their training. The estimate was 7 percent of residents in one national survey of all program directors [3] and another, by the American Board of Internal Medicine, estimated that between 8 and 15 percent of residents had serious problems during training [4].

So why are interviews not sufficient for assessing these characteristics, and why do some programs to use personality inventories? For one, interviewing applicants for any high-stakes position requires specific skills that interviewers are not often taught and experience they don't often have (faculty may interview only a few candidates in a year).

Second, commonly asked questions do little to reveal whether someone is a good fit with the program or will be successful. Third, the context of the interview is far removed from the setting in which the applicant will work. While interviewing can be stressful, it does not replicate the hospital environment's multitasking, life-threatening emergencies, conflict, and fatigue. As a consequence, the traditional interview process provides little more than an opportunity for candidates to put on their best face and answer what they think the interviewer wants to hear and for the program to sell itself.

Aware of the large investment made in new hires, the business world has studied performance prediction for years. Despite the popularity of personality inventories, their validity remains controversial [5, 6]. What has gained traction with a fairly robust evidence base is the behavioral-based interview (BBI) technique, grounded in the logic that past behavior predicts future behavior. Described by Janz in 1982, the BBI seeks to discover how the candidate acted in specific employment-based situations focusing on experiences, behaviors, skills and abilities that are job-related [7]. As opposed to asking hypothetical questions (e.g., "what would you do if..."), which allow candidates to provide the response they think is expected, the interviewer asks the applicant to discuss an actual experience and how he or she responded to it. For example, in looking at a candidate's ability to manage conflict,

he or she may be asked to “give an example of a situation in which you had difficulties or conflict with a team member and how you resolved it.” To explore a candidate’s ability to respond to negative feedback, he or she may be asked to “tell about a time when you were criticized for your performance and how you responded.” Further details of the behavior and outcome are elicited to facilitate understanding about the respondent’s motivation and the final outcome. Situations discussed may not be medically related but utilize relevant skills.

Interpreting and assessing behavioral interviews is a systematic process: the interviewer considers how relevant the skills described are to the job description, how recent the situation occurred and most importantly, what the applicant’s reasoning was, and what he or she learned from that experience [8]. An applicant’s description of what, in hindsight, he or she would have done differently may provide better insight into a candidate’s commitment to reflection and self-improvement.

While supportive research exists in the nonmedical literature on the reliability and validity of the BBI [7], there is a paucity of medical education literature on the subject. Only two studies look at the BBI in residency recruitment. One radiology program looked at the predictive ability of behavioral interviewing by comparing scores to program director’s assessments 4 years later, showing predictive utility for conscientiousness and interpersonal skills [9]. An anesthesia program looked at how this approach was received and found that the BBI process was acceptable to both the interviewers and the candidates [10].

Is behavioral interviewing going to match the perfect candidate with the perfect program every time? There is certainly no evidence to support that outcome at this time. Can it provide a better understanding of a candidate and make for a more interesting experience for both interviewer and candidate? Anecdotally, the experience of this writer and others says yes. Conversations that encourage thoughtful dialogue are much more likely to conclude with both participants more fully appreciating what the other has to offer. There is more to learn from discussing a specific experience that led to growth than from questions about why a candidate chose a given specialty.

Interviews are an important part of the application process. In the most recent survey by the National Residency Matching Program, program directors reported that an applicant’s interaction with faculty during the visit and interpersonal skills were among the top three factors contributing to his or her ranking [11]. A behaviorally based interview or personality test is not likely to undermine a candidate’s chance of matching. What is probably most important for a candidate to do on a visit to a program is to treat everyone (particularly program staff) with courtesy and respect. Program directors readily acknowledge that, each year, candidates are taken out of the pool simply for their poor treatment of staff during their visit. The feeling is if someone can’t behave respectfully during the one-day visit, how will he or she be over the next 3 to 5 years? Finally, showing genuine enthusiasm and interest will convince most interviewers that you could be a good fit in their program.

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Commentary 2

by **Julie M. Aultman, PhD, and Matthew J. Zirwas, MD**

There are two big academic hurdles for those who want to become physicians: being admitted into medical school and matching into a residency program. Those who make it over these hurdles shape the future character of medicine as a profession.

Who gets admitted into medical school and residency, then, is of crucial importance, obviously, to both those seeking admission and those who are interested in how medicine performs.

The admission processes of medical schools and residencies are not devoid of ethical considerations. Requiring applicants to take personality tests to predict future performance, for example, may introduce unfair disadvantages for no justifiable reason. The use of personality tests in the admission process will be examined from two perspectives in the attempt to answer the fundamental ethical questions:

1. How should the interests of each different stakeholder (applicants, medical schools and residency programs, society) be identified, considered, and incorporated into the admissions process?
2. If the interests of the different stakeholders conflict with each other, how should these conflicts be resolved?

Identifying the Interests of Stakeholders

We will begin by considering the *instrumental* and *intrinsic* interests of each set of stakeholders in the system. Intrinsic interests are those interests that are valued not because they lead to something else, but for their own sake, e.g., human flourishing and happiness. Instrumental interests are those interests that may lead to something else that is good or valued, e.g., earning a high income. Some things, such as education, may be intrinsic interests to some, but extrinsic interests to others.

Applicants. The primary interest of applicants is to get a medical education, which may lead to intrinsic interests, e.g., human flourishing. Thus they have an interest in a process that is fair and consistent (that will treat applicants equally so as not put any at an unfair disadvantage), transparent and predictable (that will specify what is desired in advance so candidates can work to become competitive), and based on variables over which they have some measure of influence (that focus on achievement—what one does—rather than what one is).

Variables that could be fairly, consistently, and transparently assessed, and which applicants can influence to some degree include academic performance, volunteer experiences, and research experiences. Variables over which applicants do not have control, or which may not be transparently and consistently used in the admissions process, include, for example, ethnicity, personality characteristics, and family background (e.g., parents who are physicians). Judgment on such variables can also be considered unfair or discriminatory because they are unrelated to a person's qualifications for a position (e.g., gender, race, sexual orientation) or because doing so undermines equality of opportunity. The personality test given to Brent may be fair if it is administered to all applicants, but it is not transparent—he was unaware in advance of having to take it—or based on achievement.

Medical education institutions. Medical schools and residency programs (medical institutions) all have a common instrumental interest: to select applicants who will successfully complete their training and become licensed physicians who will keep

up on new trends, information, technologies, and practice in clinical medicine or research. Beyond that, each medical institution has its own interest in producing a certain type of graduate, in part to contribute to satisfying society's interests. Examples of the types of graduates a medical institution may wish to produce include: primary care physicians, leaders in academic medicine (chairs and deans), researchers, excellent clinicians, leaders in medical administration, leaders in organized medicine, or physicians who practice in underserved locations.

Society. Society's interest in the admissions process is to have those applicants selected who will become physicians who meet the needs of society either by providing high-quality, cost-effective medical care or by promoting medical advancements through research, efficient administration, or entrepreneurial activities. This ultimately leads to human flourishing by preserving life and alleviating suffering. Fundamental to this interest is a secondary interest in the types of physicians who meet the specific health care needs of society both in terms of specialty and geographic distribution (the most acute needs at present are in primary care and underserved areas, both rural and inner-city).

It turns out that the interests of society and medical schools are relatively similar: to select applicants who will become physicians who may fill the necessary roles in medicine. We can consider these two stakeholder groups to have compatible interests specific to the admission process, although they may have diverging subsequent instrumental and intrinsic interests.

The primary difference is that there may not be alignment between the roles medical institutions emphasize and value in their selection and the roles society may value. The presumption is that medical institutions are more interested in admitting applicants who will contribute to the reputation (and thus future success) of the institution, while society's interests focus on ensuring there are an adequate number of qualified physicians to meet the patient care needs of the population. In essence, though, both medical institutions and society have an interest in an admission process that selects applicants based on predicting what type of physicians they are likely to become.

Are Personality Tests Accurate and Useful Predictors of Performance?

Personality traits have been shown to be relatively stable over time, starting at a young age [1], and a recent review of the existing literature concluded that personality assessments that identify conscientiousness, agreeableness, extraversion, openness, and emotional stability (known as the "big five") are effective predictors of performance in medical school (assuming a minimum level of academic ability has been demonstrated) [2, 3]. Personality *tests*, however, may not be reliable predictors of academic performance, especially if those administering the tests fail to consider the variables that can skew results (e.g., dishonest answers, a poor environment with multiple interruptions, mood). Moreover, there is little data on how well personality tests, grades, MCAT scores, or other variables predict a physician's performance or happiness over the course of his or her career. The lack

of data is due in part to the fact that there is no metric for performance as a physician. More work is needed to determine whether variables such as personality characteristics can predict future performance or happiness.

Resolving the Conflict

As previously stated, applicants desire an admissions process in which they have a fair chance of success, while society and medical institutions desire a process that will predict the type of physician an applicant is likely to become. Is there a way to achieve compatibility among all stakeholders, including applicants such as Brent?

Disclosing the use of personality tests in advance may be a way to fulfill society's and medical schools' interest in assessing applicants' personalities and applicants' interest in transparency. Of course, this may make the results of personality assessments more subject to student intervention and less accurate. Applicants may answer questions based on what they think the institution desires rather than what they are actually thinking or feeling, even preparing themselves to take these tests just so they can "pass." This may make personality assessments more transparent and therefore more acceptable to some applicants, but perhaps less useful or appealing to schools.

Ethical Guidance

Ramifications for the individual student. From the point of view of an ethicist, personality tests should be introduced into the admissions process *with caution*. Even if such tests are used in a clear, transparent, equal way, personality is no more under the control of applicants than are variables such as height, eye color, or ethnicity. Is it fair or unfair to select students based on these uncontrollable variables? If personality attributes are fixed core determinants of physicians' success analogous to intelligence, and we consider it fair to disqualify applicants on the basis of their intellectual performance, it would be fair to consider personality in a similar way. On the other hand, the analog of a personality *test* is an IQ test—it measures capacity, rather than achievement. Achievements should be the residency interviewer's primary focus because they show what the student can *accomplish*, not merely what attributes he or she possesses. Furthermore, the student's academic credentials are both more reliable predictors of performance in medical school and more reliably measurable. The question is less whether using IQ or personality tests is fair than whether using them is as effective as assessing performance.

In looking at the case of Brent, for example, the residency interviewer should focus on the work he's done, while being transparent about the type of physician the institution and community is looking for. If Brent meets the minimum criteria for achievements, such as academic performance and engagement, research, and extracurricular and volunteer activities, and if he professes that the type of physician the institution seeks to produce is in alignment with his goals, then a personality assessment can be used as a *secondary* instrument to determine Brent's fit with the environment of the institution and, potentially, as one of several tools to guide professional development.

Frequent personality testing prior to pursuing medicine—before applying to medical school or committing to a premed major—could help counsel students regarding whether or not they would be happy as physicians (or a particular type of physician). Such testing prior to medical school and residency would also alleviate concerns among applicants about the legitimacy of the tests, since personality testing over time would reveal more consistent data with fewer errors and make clearer the intrinsic and extrinsic interests possessed by applicants.

To ensure a fair, transparent admissions process that would not be discounted or resisted by applicants, the purpose, risks (false-negative and false-positive rates), and quality (reliability, validation, freedom from bias) of these assessments should be disclosed in advance to all applicants (e.g., on an institution’s web page or list of criteria for residency matching). Through such disclosure, admissions committees may put candidates at ease, possibly even persuading them to answer honestly.

Implications for society. There is a broader consideration at play here as well. The personalities of individual medical students can, collectively, shape the character of the profession as a whole. If medical schools and residency programs preferentially admit applicants who are compassionate, empathic, and intrinsically motivated (dubbed “type I” people in the 2009 book *Drive*, by Daniel Pink [4], their actions will lead to a far different profession than selecting those who are organized, achievement-oriented, and extrinsically motivated (“type X”).

A medical field dominated by type I doctors would believe that the intrinsic satisfaction of using one’s natural talents and skills to help patients was the primary reward of being a physician. Extrinsic factors like hours worked, compensation, and external recognition would still matter, but would be secondary. A medical field composed mostly of type X individuals would, while acknowledging the importance of intrinsic factors, focus primarily on the extrinsic factors.

If one considers those with similar natural talents, type I individuals will almost always outperform type X individuals over the long run (decades) but not in the short run (years), especially if the performance metrics are well defined and easily measured. Type X students who desire to become physicians would be expected to outperform their type I classmates in the education years, when outcome variables (e.g., grades, standardized test scores) are well defined but to underperform in the decades of medical practice that follow, when outcome variables (e.g., being a “good doctor”) are not well defined.

Accepting Pink’s categories would behoove us to identify and promote type I candidates for medical education. On the other hand, it can also be argued that a diverse range of personalities would best serve the pluralistic values of society and its interests, which may not be consistent with the interests of a homogenous profession. Either goal—creating a primarily type-I or a psychologically diverse physician workforce—could be furthered by accurate and reliable personality testing.

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ETHICS CASES

Legacy Admissions in Medical School

Commentary by Carol L. Elam, EdD, and Norma E. Wagoner, PhD

The admissions committee of a well-known, private medical school convened to discuss changing admissions criteria as well as the upcoming interview season. Clara, a fourth-year medical student was thrilled to become the student representative on the admissions committee, many of the members of which she admired. She looked forward to learning more about a process that seemed very mysterious and daunting to her just a few short years ago.

During the meeting the committee discussed weighting of undergraduate grades, and volunteer and extracurricular experiences; formed thoughtful, probing interview questions; and much more. As the session was about to conclude, the dean of admissions asked the panel, “Anyone know of any more family members of faculty who are applying this year? I have a brief list already, but want to make sure I’m being thorough here as the season gets closer.”

Clara was stunned that, after all the meticulous work they had done to ensure that the best candidates were chosen for admission, such things were taken into consideration. Gathering up her courage, she asked, “Excuse me, but why would such a thing matter? If they are great candidates, shouldn’t their application and interview experiences speak for themselves?”

The dean of admission said, “I hate to say it, but it’s the way things have always been done. Many wonderful graduates of our medical school have come from physician families and have given back a great deal to the school. Students from physician families tend to be well prepared for the rigors of medical school, and they have a good perspective on what they’re getting into.”

Commentary

Medical school admission committees have the difficult task of selecting students from a large group of talented applicants. The process of selection is complex. Holistic review of applicant files is endorsed by the Association of American Medical Colleges [1]. Holistic review means considering myriad factors in decision making, including academic performance, personal characteristics, exposure to and understanding of the demands of the medical profession, experiences in leadership and team work, and service to others, as well as how a student “fits” or can advance the mission of the medical school. Competition is stiff and the number of positions in each medical school’s entering class is finite, so prospective applicants (and their

parents) have asked what they can do to make an application stand out and if there is there some edge that could help an applicant be judged more competitive than others.

One commonly held perception is that being a legacy applicant, a child of an alumnus, provides an advantage, and, by extension, that being the child of a faculty member or a physician may do so as well. Is this the case? Frankly, it is hard to find objective information in response to this question. Few if any published studies exist on this subject in the medical literature, and medical schools would be unlikely to list the value of a family connection in their published selection criteria. However, as two long-time admissions deans, perhaps we can supply some insights about the perceived contributions and challenges that alumni connections may make in selection decisions, and then consider what the ethical implications are of the “advantages” of being a legacy applicant.

Does an alumni connection influence the admissions process? An honest answer would be yes, indirectly. Having parents from a medical background, whether legacy or not, may confer a distinct advantage to students in the following ways:

- Their parents can advise and guide them based on the experience of securing admission to medical school and successfully completing medical training.
- Academic performance may have been strongly stressed in their upbringing.
- They have easier access to shadowing experiences in medical settings through their parents’ contacts.
- They may be from a higher socioeconomic background than other applicants, which may afford opportunities for experiences (such as strong primary and secondary schooling, attendance at respected colleges and universities, opportunities for study abroad, and medical outreach work) and remove the burden of having to support themselves, leaving more time to focus on preparation for medical school.

Challenges for legacy applicants in the admissions process, on the other hand, might include some of the following:

- Members of the admissions committees recognize that medicine may be perceived as the “family business” in physician families and that some applicants are more motivated to pursue medicine by familial pressure than by personal interest. Thus, applicants may be questioned more closely about their personal motivation for a career in medicine, which, unless convincingly answered, can work against them.
- Since legacy applicants are perceived to have significant financial and personal advantages over other candidates, the committee’s expectations for their accomplishments at the time of medical school application may be higher.
- Some physician families (including legacy parents) who are more assertive in advocating for their children can be seen as overly intrusive in an admissions process, with potential fallout for the applicant.

Ethical Analysis

It doesn't take long to look around and see all kinds of potentially unfair advantages in an admissions process. As an example, wealthy physician parents pay for their son or daughter to take an expensive MCAT prep course, giving them the advantage of higher scores. Most students believe that selection of a class should be based on academic merit and will often compare their credentials with students who achieve entrance with "lower scores." This can and does lead to cynical feelings that the competitive admission process is unfair. Debate has long taken place at the college level about unearned advantages offered to legacy and affirmative-action students, continually raising questions about the integrity of the process [2].

Having said that most medical schools take note of legacy applicants as well as faculty children in the application process, to what extent is "consideration" given? We don't know, although admissions committees are not generally pressed to take candidates who are demonstrably unfit for the study and practice of medicine. It is often a matter of awareness of the applicant pool, perhaps some recognition of the need to express a degree of "courtesy" as requested by the dean, alumni office, development office, politicians, and so on. Would most admission committees prefer not to operate with these pressures? Probably yes, but such pressures are a fact of life. We believe that the ability to develop a truly level playing field in the admission process is a perpetual challenge.

Clara asks, "Is it legal to provide 'courtesies' to legacy applicants?" According to Kahlenberg, "courts recognize that colleges and universities should be given leeway in admissions in order to promote academic freedom" [3]. He goes on to note that this freedom is not unlimited, even at private institutions. "Ancestry discrimination—providing a leg-up in admissions based not on merit but on whether a student's parents or grandparents attended a particular university falls outside the protected zone of academic freedom" [3].

In the interest of fairness and equity in admissions decisions, admissions deans must ensure their committees make selection decisions on the basis of their admissions policies and enrollment goals. They must abide by national accreditation standards related to admissions and should be guided by the tenets of the holistic review process: to look at all aspects of an applicant's file and to select those students, who, on the basis of their accomplishments and personal qualities best fit the mission of the school and are most likely to be successful students and then competent and caring physicians. In the end, the admission process is an art, not a science, and most admissions deans work hard to make the process fair.

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CONLEY ESSAY

2011 Winning Essay

Is Anything Wrong Here? State University's Scholarship Case

William Smith

State University Medical School's explicit, community-based mission is to educate primary care physicians for its home state, which comprises mainly small towns and rural areas.

As its fortieth anniversary approached, State U. Medical School administration reviewed alumni data and realized that the school had not come close to fulfilling its mission. The school required those who received financial aid to complete residency in a primary care specialty within the state. If they did so—and most did—their loans were forgiven. But the alumni data showed that, over the years, an average of 60 percent of residents had gone on to fellowships in subspecialties immediately after residency, and many of those had moved out of state to practice.

As a corrective to this “mission slippage,” a new policy for state-funded loans and privately funded scholarships was proposed such that students who declared their interest in practicing primary care in the state and received full tuition from state or private sources had to practice primary care in the state for 10 years after completion of their residencies to repay the cost of their medical education. There was a sliding repayment scale based on service increments of 1 year for those who practiced primary care in-state but did not fulfill their 10-year service agreement.

Several of the school's private funders objected to the proposed policy; at least one was outraged.

“I've always supported our mission,” he said, “but this new policy is coercive. It's social engineering, is what it is. Flies in the face of everything this country and this state stand for. When my grandfather came to this state in the early part of the last century, a man could make his living any way he wanted to, long as he didn't break the law.”

“What's worse,” the funder continued, “is that this policy hurts the middle- and low-income kids. The rich kids don't need our support, so they can practice anything they want, anywhere they want.”

Response

“Deficit” has proven a buzzword in recent years. Several states are facing significant budget deficits. In states’ efforts to cut costs, state medical schools and state loan forgiveness programs are feeling pressure [1]. Thus, states and schools should find ways of improving any budgetary deficits and collecting on any budgetary losses. Increasing gains from rural scholarship programs is one possibility, and so this case is worth reflection not only for its own sake, but for the sake of other states considering similar policy. However, moral indignation may follow elsewhere as it did in the case of State University. Is such indignation justified? Is there anything wrong with State University’s proposed scholarship policy?

We want to know (1) whether the proposed scholarship plan is *morally permissible* and (2) if so, whether it is most favorable among the permissible options. I will argue that it is permissible—with minor amendments—but that it is not the best of the permissible options generally speaking. However, it may be the best available option, depending upon the particulars of a state’s political climate.

In what sort of ways might this policy be impermissible? One benefactor objects: the proposed loan forgiveness strategy is (a) coercive, (b) social engineering, and (c) “hurts middle- and low-income kids.” Making sense of (a) is simple enough; coercion constitutes a wrong and is thereby impermissible. The charge that the strategy constitutes social engineering is somewhat confusing. Assuming that the social engineering should be (roughly) understood as offering incentives to change societal preferences and alter societal choices, it is unclear what speaks against “social engineering.” This sort of activity is engaged in by government and business routinely [2]. Therefore, let’s cast (b) aside as a red herring. Allegation (c) is somewhat ambiguous. It might mean that the policy is impermissible in virtue of “hurt[ing]”—or properly speaking *harming*—the students. Alternatively, (c) might be better understood as wrong in virtue not merely of the harm, but of the fact that the students harmed are “low- and middle-income kids.” This raises two possibilities: either the policy is wrong because it is distributionally unjust or the policy is wrong because it is exploitative. So the benefactor actually raises four possible objections; the policy may be impermissible as an instance of (1) coercion, (2) harmful wrongdoing, (3) distributional injustice, or (4) exploitation. I will argue that it is not an instance of the first three, and that, if it is an instance of the fourth, it can be remedied with a few amendments.

Coercion. A proposal is coercive if and only if one party proposes to violate the rights of another unless the second party complies with the first party’s directives [3]. Does the university’s offer to the student constitute a proposal to violate the student’s rights? It is unclear what right might be violated. The benefactor objected that “a man [used to be able to] make his living any way he wanted to, long as he didn’t break the law.” This might be a way of saying that individuals have a right to pursue any business venture with lawful means [4]. If so, this right must be a negative right (that others not interfere with their career plans) rather than a positive

(that others enable them to pursue any business venture that they choose). But the university is not violating this negative right.

Then again, this definition of coercion is not universally accepted, but most agree that coercive proposals must at least be threats rather than offers [5]. How can the university's offer, which expands the students' options rather than limits them, be coercive? Some argue that certain offers may be coercive. David Zimmerman is the most prominent defender of this view. On his account an offer is coercive only if the offering party is actively keeping the offered-to party in a position that makes the offer attractive [6]. Yet on this account the university's offer is not coercive because the university is not keeping the students in this scenario in such a position.

Wrongful harmdoing. It should be noted that the university is not worsening the students' financial means or welfare, or infringing their rights [7], so it is hard to see how it "hurts" the middle- and low-income students. The benefactor notes that students who accept the offer cannot "practice anything they want, anywhere they want." Yet the university is only taking away that right in virtue of the students' contractual obligations, and the students are clearly free to refrain from contracting.

Distributionally unjust. Perhaps the benefactor believes that the university owes more to the less well-off because they are less well-off [8]. We all owe something to those less fortunate than we; maybe the university should discharge this obligation by helping these students. This form of the objection touches on some of the deepest problems of political philosophy—the scope and extent of our duties to the less fortunate. I think, however, we can answer this objection without taking up these issues.

Presumably the argument that the university must discharge its obligations in this way hinges on the claims of some special relationship with *these students* or the fact that this is the best way of discharging a general obligation to the less fortunate. Further argument would be required to defend the former special obligation claim; the university has many competing obligations from special relationships with its patients, state residents, and members of the rural population of the state. I see no obvious reason that the students' claims take priority. To argue for the second claim—the school's general obligation to the less fortunate—one would have to clarify all ways that the university might bring about a more just state of affairs, arguing that this way of discharging the obligation is better than any alternative. I doubt that this argument can be provided [9].

Exploitation. Maybe the benefactor has in mind a different claim, that the university is unfairly taking advantage of these students. On this view the policy targets "the low- and middle-income kids" because of their financial constraints. *Exploitation* occurs when one individual gains an unfair benefit from an exchange with another; the question is not about the structural conditions that create incentives for the transaction, but about whether the costs and benefits are fair to each party [10]. Hence, the policy is not exploitative merely because the students are "low- and

middle- income kids” [11]. The question is whether the students’ gains and costs are unfair.

Exploitative offers may confer either a net cost or a net benefit to the exploited party [12]. It is unlikely that there is a net cost. Opponents of the scholarship program might think that the students incur a cost in expected earnings by working in a rural area that the scholarship is insufficient to compensate. Surprisingly, evidence shows that the difference in income is only approximately 5 percent [13]; moreover, when adjusted for cost of living, rural physicians may make more than their urban colleagues [14].

Alternatively, opponents of the program might think that there is a net loss to students’ well-being that cannot be construed merely in economic terms. Yet if students perceive such a net loss to their well-being, it is hard to understand why they would consent to it [15]. Opponents might respond that such students are misunderstanding their own interests, are uninformed about their potential future outcomes, or are committing some other rational error; and so they are consenting to an offer that is against their interests. However, accusing students of misunderstanding their own interests may be paternalistic. Students may value working in rural family health settings [16, 17]. Likewise, we should be careful to resist the thought that they are committing some rational error just because opponents of the policy believe that the transaction is unfair. At the very least, we should want further support for this claim, and I am not certain of what it is. However, students may be uninformed about their possible futures, enabling them to be exploited. This charge of exploitation would then be parasitic on a further way that the policy might be impermissible, one which the benefactor did not consider: consensual defect.

Consensual defect. One might argue that the students are entitled to disclosure of their expected future opportunities [18]. If the university does not disclose, it is violating the rights of the students. It is not clear whether students are entitled to such disclosure. It is considered “fair game” in many contractual negotiations to keep certain information from the other party (consider, e.g., labor union negotiations). In other situations nondisclosure constitutes a wrong, rendering the transaction nonconsensual (consider withholding a car’s repair history during used car sales). I do not know whether the students are entitled to such disclosure; however, the remedy to this potential wrong and the exploitation that it might enable is simple: disclose expected future opportunities for pursuing and not pursuing this offer.

Students may be committing other rational errors, but it is not obvious that they are doing so. Moreover, it is simply not obvious that the students suffer a net loss in this transaction. So let’s set aside that possibility and consider whether the students are being exploited while gaining from the transaction.

The university may be exploiting the students—even though they are benefiting from the transaction—if the degree to which the students benefit is not fair. Consider the

case of price gouging. If a catastrophe leads to a gas shortage and the local gas station grossly increases prices, I may be better off with the gasoline even if the gas station is exploiting me.

One might argue that the sliding scale of repayment and the length of service impose too much cost on students for their commitment. My own intuitions are that this transaction is perfectly fair. (Remember that if students break the agreement, they merely repay the amount that they would have paid in tuition and interest if they had never made the agreement). However, reasonable people may disagree about the case. Given the possibility that reasonable people will disagree, State University should consider a public deliberation process in which potential and current students, university representative, citizens (especially those from a rural area), benefactors, and other stakeholders share their views about what the fair terms of the agreement might be.

We have seen that the university's policy is not coercive, harmful wrongdoing, nor distributionally unjust. The policy may be exploitative, and students may be deprived of their due disclosure. Thus, it is reasonable to add (1) a disclosure process, counseling the students on their options and their expected future scenarios given whatever decision they make, and (2) a public deliberation about the terms of the agreement. At this point, I want to suggest that this is all that can reasonably be expected of the university and, as I can see no other wrong that the university might be charged with, I conclude that the policy is permissible for the university and the benefactors.

Among the permissible policies, is this the one the university should choose? The answer to this question depends on a number of considerations. Does this policy maximize long-term retention of physicians in the state's rural areas? How does it affect the well-being of the students? How does it affect patient care? Evidence suggests that loan repayment programs—which physicians enter after their training—attain better long-term retention and physician satisfaction than scholarship programs, such as the proposed policy—which students commit to before medical school [19]. Such evidence suggests that programs which create commitments after medical school or residency should be preferred over scholarship programs like the one proposed.

Nevertheless, such choices may not be an option for State University. Consider one possibility. Programs aimed at attracting physicians later are often pursued on a statewide level without specific ties to any university; although State University's funding might be put to better use through such a program, the funding may not be tied to the university [20]. If so, the university may prefer guaranteed funding to a suboptimal program over funding to an optimal program that may not come to fruition [21].

Sorting through these particulars requires more information about State University's political climate than we have. As with many ethical issues, practical wisdom will be

required when implementing ethical judgments, especially in the realm of politics [22]. We must, therefore, be satisfied with the limited conclusion that programs aimed at recruiting physicians after medical school are more likely to meet State University's goals than scholarships for students. However, the proposed scholarship plan is permissible—with the two amendments previously mentioned—and should be pursued if it is the optimal path in the state's political climate.

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8. The view that distributional justice requires that society create distributional policies that preferentially favor the less well off (prioritarianism) is most famously advocated in Rawls J. *A Theory of Justice*. Cambridge, MA: Harvard University Press; 1971.
9. In fact, I will later argue that at least one policy is superior.
10. Wertheimer A. *Exploitation*. Princeton, NJ: Princeton University Press; 1996: 10-12.
11. Compare points made about exploitation of poor countries during research participation in the “fair benefits” framework put forward by the Participants in the 2001 Conference on Ethical Aspects of Research in Developing Countries. Moral standards for research in developing countries: from “reasonable availability” to “fair benefits.” *Hastings Cent Rep*. 2004;34(3):17-27, which is also indebted to Wertheimer's *Exploitation*.

12. For argument that exploitative transactions can benefit the exploited party, see: Wertheimer, *Exploitation*, 14-24, 207-246. These transactions are still impermissible because they are exploitative.
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15. Actually, if one believes that students are consciously sacrificing their own interests for the sake of others (i.e., patients in rural communities), then it would not be hard to understand why they would consent to something that makes them worse off. For my thoughts about whether this case might be one of self-sacrifice and exploitation, see note 17.
16. In fact, rural background is associated with recruitment and retention to rural medicine, suggesting this may be the case. See Daniels ZM, Vanleit BJ, Skipper BJ, Rhyne RL. Factors in recruiting and retaining health professionals for rural practice. *J Rural Health*. 2007;23(1):62-71.
17. We should be careful here as students might value some activity, and yet take it to be a loss to their well-being. Cases of self-sacrifice often have such a structure. So there are two options: either students take themselves to be gaining (in terms of their interests) from this transaction, or they take themselves to be losing (in terms of their own interests) but are happy to sacrifice their interests for the interests of others. These cases might be importantly different for the theory of exploitation generally. However, regarding the case at hand, my response to both would be the response that I give to the worry that the sliding scale of repayment and the length of service impose too much cost on students for their commitment and is therefore unfair. See 67-68 of the text above. So, we may sidestep the larger issues in the theory of exploitation for the purposes at hand.
18. Many have argued that this is true in regard to "informed consent" to medical decisions. For the canonical statement on disclosure in informed consent, see Faden R, Beauchamp T. *A History and Theory of Informed Consent*. New York: Oxford University Press; 1986: 305-315.
19. Pathman DE, Konrad TR, King TS, Taylor DH Jr, Koch GG. Outcomes of states' scholarship, loan repayment, and related programs for physicians. *Med Care*. 2004;42(6):560-568. As Pathman et al point out, increased satisfaction and retention is likely due to the fact that physicians who are offered an option after medical school can make commitments after they have made career and family decisions, and so these commitments may harmonize with these decisions. On the other hand, those who commit earlier may later find conflicts with career and family desires.
20. Perhaps the funding originated in the state legislature, and the state funding would be better put to use through the alternative program. This would be better if possible, but depending on the state's political landscape,

21. This is just one way in which pursuing alternative policies may be impractical; there may be others. For instance, the funding may be tied to the university through trusts or endowments, creating the same tactical problems.
22. Consider another political hurdle. Legislators may have a stronger interest in giving scholarships to their constituents than in supporting loan repayment programs, which could be competed for by out-of-state residents.

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CONLEY ESSAY

2011 Runner-Up Essay

The Purpose of a Medical School

Elizabeth Joe

State University Medical School's explicit, community-based mission is to educate primary care physicians for its home state, which comprises mainly small towns and rural areas.

As its fortieth anniversary approached, State U. Medical School administration reviewed alumni data and realized that the school had not come close to fulfilling its mission. The school required those who received financial aid to complete residency in a primary care specialty within the state. If they did so—and most did—their loans were forgiven. But the alumni data showed that, over the years, an average of 60 percent of residents had gone on to fellowships in subspecialties immediately after residency, and many of those had moved out of state to practice.

As a corrective to this “mission slippage,” a new policy for state-funded loans and privately funded scholarships was proposed such that students who declared their interest in practicing primary care in the state and received full tuition from state or private sources had to practice primary care in the state for 10 years after completion of their residencies to repay the cost of their medical education. There was a sliding repayment scale based on service increments of 1 year for those who practiced primary care in-state but did not fulfill their 10-year service agreement.

Several of the school's private funders objected to the proposed policy; at least one was outraged.

“I've always supported our mission,” he said, “but this new policy is coercive. It's social engineering, is what it is. Flies in the face of everything this country and this state stand for. When my grandfather came to this state in the early part of the last century, a man could make his living any way he wanted to, long as he didn't break the law.”

“What's worse,” the funder continued, “is that this policy hurts the middle- and low-income kids. The rich kids don't need our support, so they can practice anything they want, anywhere they want.”

Response

An impressive number of people have an opinion on the training of physicians. There are the educators, the faculty and deans and department chairs who live in academic medicine and have firsthand experience with the ways in which it falls short. There are public health officials and hospital administrators who predict changing disease patterns and envision workforce shortages 20 years hence. There are the patients who benefit from the latest innovations but may be inconvenienced by how things operate at teaching hospitals. And of course there are the students themselves, with exceedingly earnest personal statements about wanting to *save lives* and *help people* while also earning a living. Medical schools have to accommodate all these groups while still carrying out the core functions of a professional school: to “transmit knowledge, to impart skills, and to inculcate the values of the profession” [1].

Private medical schools are free to balance these interests as they see fit. Their public counterparts have the additional burden of accountability to the taxpayers of the state in which they are located. An unscientific survey of state medical schools’ mission statements suggests that they fall into two main camps. There are those that are centered around their students’ success, like the School of Medicine at University of Missouri, Kansas City, which strives to “prepare graduates so they are able to enter and complete graduate programs in medical education, qualify for medical licensure, provide competent medical care” [2]. Likewise UCLA prepares “our graduates for distinguished careers in clinical practice, teaching, research, and public service” [3]. Such schools define their purpose around their obligations to their students, the implication being that society benefits from the provision of well-trained physicians and the apparatus of the academic medical center.

On the other hand there are those schools with a community-focused mission, like University of Massachusetts, which begins by aiming to “advance the health and well-being of the people of the commonwealth and the world” [4], or Ohio State, which tries “to improve people’s lives through innovation in research, education and patient care” [5]. To such institutions, the teaching of medical students becomes almost a secondary goal, a means to a greater end.

State University Medical School (SUMS) falls squarely into the latter camp. With an explicit mission to educate primary care physicians for Home State, it has historically relied on a variety of financial mechanisms to encourage students to pursue careers in primary care. These incentives have been ineffective at best, with much of the funding going to support students who subspecialize or move out of the predominantly rural state. Now that SUMS has tried to remedy the situation with more rigorous criteria for loan forgiveness, it has been accused of social engineering by its outraged private funders, who are concerned that the proposed policy unfairly penalizes those students who rely on loan money to support their education, leaving those from wealthier upbringings free to pursue their vocational dreams.

To be worth implementing, SUMS's new loan forgiveness program should be both fair and effective. The first gets at the core ethical issue in this scenario, the justice of preferentially allocating a scarce resource (in the form of financial aid) in favor of those students willing to practice a specialty of benefit to the citizens of rural Home State. The intended effect of the policy is to shift loan forgiveness dollars to students who practice primary care. By doing so, SUMS hopes to better effect its mission and meet its responsibilities to state taxpayers. The implication is that students who formerly pursued subspecialties of internal medicine or pediatrics will no longer benefit from the program.

Students with full family support for medical training will be unaffected. For low- and middle-income students, who rely on loans to finance their education, the new policy removes their option to engage in fellowship training while also qualifying for loan forgiveness. The conflict emerges because the best interests of society, to have an adequate supply of primary care physicians, may not reflect the best interests of the students, to pursue their career of choice unencumbered by financial obligations.

SUMS has clear responsibilities to its students to prepare them for residency and licensure. But while students should rightly expect their training to allow them to become physicians, it does not follow that SUMS cannot promote certain specialties through mechanisms financial or otherwise. An outraged private funder is concerned that the proposed policy is unduly coercive; it is not. Applicants to SUMS who are not interested in primary care can apply to the numerous private medical schools that are not mandated to produce any particular flavor of physician. There are ample loans available that are unrestricted by specialty, courtesy of the federal government. If these students go to other medical schools, more positions would be available in the entering class for students who are truly committed to primary care. Moreover, students with an initial interest in primary care who discover other interests during training are entirely free to pursue their career goals. SUMS is asking only that Home State not be asked to bear the costs of their educational fulfillment. As the private funder's grandfather was indeed able to make his living any legal way, the students may do likewise. They are not entitled to receive their training on the taxpayer's dime, however.

The intent of SUMS's loan forgiveness policy has always been to encourage careers in primary care. The recipients who went on to subspecialize after accepting loan forgiveness were in effect gaming the system, following the letter but not the spirit of the program. Allowing the perpetuation of a system that rewards young doctors for completing a primary care residency without requiring that they ever practice primary care is an abuse of the public trust. SUMS is right to address this disparity and to consider changing the criteria for financial aid.

By the nature of a loan forgiveness program, the proposed changes will clearly affect low- and middle-income students more than wealthy students, who may be able to graduate medical school debt-free thanks to family contributions. In this way the new policy is similar to other programs such as the Health Professions Scholarship

Program or the National Health Service Corps, which exist to supply the nation's military and underserved areas respectively. In all cases students have some of their educational costs underwritten in return for providing a needed service. Students are no more coerced into entering primary care fields than they are into joining the military. Still, it seems unfair for students with more financial need to feel that their future debt loads limit their career options. Yet SUMS need not abandon its mission of training primary care physicians, or persist in a clearly suboptimal program in its pursuit. Rather, it is to create a source of financial aid for students who show aptitude for other fields in medicine. This approach—enabling students in need to follow their interests—is perhaps better suited to private funders, who are free to scholarship whoever they want. That way SUMS remains responsive to the needs of Home State, while allowing philanthropists to further the equally worthy goal of supporting medical students from low- and middle-income backgrounds.

To realize SUMS's goal of increasing primary care graduates, however, it is not enough for the proposed alterations to the loan forgiveness program to be merely fair. An acceptable solution will also be highly effective, and it is here that the new plan falls short. While a frequently referenced barrier to primary care careers, the absolute amount of student loan debt has not been shown to correlate with specialty choice [6]. The choice of a medical specialty is multifactorial, involving students' interests and how they perceive them to align with specialty characteristics, the medical school curriculum and experience, lifestyle and financial considerations, and others [7]. While many of these factors are outside of a medical school's control, there are a number of interventions that are consistently associated with student decisions to pursue primary care, such as a required third-year primary care clerkship, more weeks in family medicine clerkship, or a longitudinal primary care experience [7]. Such experiences additionally benefit all students in the class, promoting cross-discipline understanding and respect, key attributes in a team-based health care environment.

Finally, many of the factors discouraging students from pursuing primary care are structural. Perceived flexibility and “controllable lifestyle,” the desire for a well-paying job after completion of medical training, concerns about paperwork burden, malpractice environment, and physician autonomy [7] may all impact specialty choice, and are beyond SUMS's control. Nonetheless, as a public medical school in a mostly rural state, SUMS is well positioned to initiate a broader discussion of the primary care environment in Home State. Some reforms may require action by the state legislature; others by private health care organizations. Dollars to promote primary care careers should go where they can make the greatest impact; redirecting some of the funds should not adversely impact SUMS since they have been funneled directly to the loan forgiveness program.

SUMS is right to seek to alter an underperforming program to better serve the residents of Home State. Before implementing the proposed plan, however, a broader discussion of barriers to primary care in the context of specialty choice needs to happen. SUMS may find that other schools have found other mechanisms besides

loan forgiveness to achieve high rates of primary care-oriented graduates. By reallocating funds to those programs that show the most promise, SUMS can meet its responsibilities to both its students and Home State.

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CONLEY ESSAY

2011 Runner-Up Essay

“Social Engineering” versus “Medical Patriotism”: What Flexner Can Teach Us about Solving the Primary Care Crisis

Eliza C. Miller, MD

State University Medical School’s explicit, community-based mission is to educate primary care physicians for its home state, which comprises mainly small towns and rural areas.

As its fortieth anniversary approached, State U. Medical School administration reviewed alumni data and realized that the school had not come close to fulfilling its mission. The school required those who received financial aid to complete residency in a primary care specialty within the state. If they did so—and most did—their loans were forgiven. But the alumni data showed that, over the years, an average of 60 percent of residents had gone on to fellowships in subspecialties immediately after residency, and many of those had moved out of state to practice.

As a corrective to this “mission slippage,” a new policy for state-funded loans and privately funded scholarships was proposed such that students who declared their interest in practicing primary care in the state and received full tuition from state or private sources had to practice primary care in the state for 10 years after completion of their residencies to repay the cost of their medical education. There was a sliding repayment scale based on service increments of 1 year for those who practiced primary care in-state but did not fulfill their 10-year service agreement.

Several of the school’s private funders objected to the proposed policy; at least one was outraged.

“I’ve always supported our mission,” he said, “but this new policy is coercive. It’s social engineering, is what it is. Flies in the face of everything this country and this state stand for. When my grandfather came to this state in the early part of the last century, a man could make his living any way he wanted to, long as he didn’t break the law.”

“What’s worse,” the funder continued, “is that this policy hurts the middle- and low-income kids. The rich kids don’t need our support, so they can practice anything they want, anywhere they want.”

Response

I entered medical school planning a career in primary care, either general pediatrics or family medicine. A few months ago, I graduated into my chosen specialty: neurology, possibly subspecializing in neuro-oncology. But should this career decision be made solely on the basis of my personal preference? Does my country need another neuro-oncologist? Should specialty mix be determined by the needs of the public? What role should the state play in influencing the career choices of future physicians?

In 1995, the World Health Organization defined “social accountability” for medical schools as “the obligation to direct their education, research and service activities towards addressing the priority health concerns of the community, region, and/or nation they have a mandate to serve” [1]. The concept was hardly new; Abraham Flexner articulated it in the famous 1910 report to the Carnegie Foundation that sparked a sweeping reform movement in United States and Canadian medical education. In that report, he noted that “the interest of the public is to have well-trained practitioners in sufficient number for the needs of society” [2], adding: “if... medical education is a social function, it is not a proper object for either institutional or individual exploitation. Society ought to provide means for its support according to the best light attainable” [3]. And indeed, society does support medical education: Medicare paid out \$9.5 billion in 2009 to subsidize U.S. residency training [4]. This is, of course, in addition to government-sponsored programs designed to encourage medical students to enter primary care practice in underserved areas, such as the program described at State University School of Medicine in the offered scenario.

Government subsidy of medical education rests on several fundamental assumptions. First, that the training of doctors, along with concomitant investment in medical research, is necessary for the public good, and will ultimately result in better health for the public. Second, that physicians are inherently honorable and moral people, as evidenced by their avowal to the Hippocratic Oath, which includes in its original version a clause to “preserve the purity of my life and my art” [5]. Presumably, a physician’s moral obligation is to put the health of the patients and communities he or she serves before such mercenary concerns as personal wealth or prestige. Flexner termed this “medical patriotism,” defining it as “that sort of regard for the honor of the profession and that sense of responsibility for its efficiency which will enable a member of that profession to rise above the consideration of personal or of professional gain” [6].

Unfortunately, however well developed the morals of physicians in training, we have not demonstrated a tendency to put the public health before our personal concerns when it comes to specialty choice. Hauer et al. showed that only 2 percent of graduating fourth-year medical students planned a career in general internal medicine; most students were drawn to subspecialties due to factors such as income potential and perceived “controllable lifestyle” [7].

Subsidized tuition assistance and loan-forgiveness programs, such as the one described at State University School of Medicine, offer incentives to students who commit to practicing primary care in an underserved area. The programs are similar in concept to the scholarships offered to students who agree to serve in the military after medical school. The state makes an investment in the student; the student agrees to repay this investment with service. If the student defaults on this agreement and chooses to pursue a different career path, the debt must be repaid with interest. The described program is unusually flexible in that it offers sliding-scale repayment terms based on the number of years of service the physician is willing to provide. In contrast, the federally funded National Health Service Corps program, which offers students full-tuition scholarships and stipends during medical school in exchange for a year-for-year service requirement in an underserved area, holds students who default on their commitment liable for damages equal to three times the scholarship funds awarded, plus interest [8].

The private funder described in the scenario objects to the proposed arrangement on the grounds that it is “social engineering.” The *Oxford English Dictionary* defines that term as “the use of centralized planning in an attempt to manage social change and regulate the future development and behaviour of a society” [9]. By this definition, the funder is correct; the state is attempting to enhance access to primary care, thus improving the future health of its citizens, by influencing the behavior (in the form of specialty choice) of medical students. However, the state is hardly using coercive measures; the students in question are free to take on private loans or to repay their state loans if they change their minds.

Does this policy disproportionately target low-income students, as the objecting funder claims? Rare is the medical student rich enough to simply write a check for the hefty tuition bill, and banks are only too willing to make loans to any student gaining admission to medical school. Rosenblatt et al.’s large 2002 study found that 83.5 percent of graduating medical students were in debt, incurring an average debt load of more than \$100,000 (the maximum load was more than \$450,000). Interestingly, while a larger proportion of minority students were in debt, the debt load exerted only a mild influence on specialty choice. Minority students and women were more likely to choose primary care careers, and, notably, larger debt loads were actually associated with a higher likelihood of choosing to work in an underserved area [10].

In sum, debt does not appear to be a major determinant of a medical student’s specialty choice; the poor student who is determined to become a surgical subspecialist will have ample opportunity to repay these loans, no matter how high the interest rate. Rosenblatt’s study implies that, while government policies addressing student debt may help low-income students who wish to enter primary care, such policies are unlikely in themselves to address the shortage of primary care providers. On the other hand, medical school selection policies that focus on racial diversity may be more likely to produce physicians who aim to practice in underserved areas.

The argument that State U.'s proposed policy "flies in the face of everything this country and this state stand for" warrants discussion. If we regard the physician as an entrepreneur, motivated primarily by profit, then policies that encourage less-profitable specialty choices like primary care would appear to discourage free enterprise. If we view the physician as having a primarily social mission to care for the public health, supported by the state, then we may disregard this argument. Unfortunately, the role of the physician in this regard is far from clear. While the United Nations has defined health as "a fundamental human right indispensable for the exercise of other rights" [11], recent debates on health care reform in this country have confirmed that Americans are profoundly ambivalent regarding their government's role in guaranteeing health care for all.

Let us consider an extreme example of the sort of government "social engineering" of a primary care workforce to which our funder objects. In Cuba, a communist nation, medical education is completely free, but a physician's salary is relatively modest, only about 1.5 times the average Cuban worker's salary [12]. Since the tightening of the U.S. trade embargo in 1992 (the "Torricelli Bill"), Cuba has contended with a severe shortage of medical supplies and equipment. Initially, this resulted in a decline in the nation's health, but Cuba responded with aggressive implementation of a highly structured national primary care system. Each neighborhood has a family medicine clinic with a doctor responsible for the immediate area. Specialty services are available at regional "polyclinics," which encompass several neighborhoods. Nearly two-thirds of medical school graduates in Cuba will practice family medicine at one of these clinics [13]. Furthermore, the medical education system, including the internationally acclaimed Latin American School of Medicine (ELAM), focuses on training doctors from around the world to provide primary care in underserved regions with limited resources (including communities in the United States) [14]. The public health results of Cuba's efforts have been impressive: Cuba boasts the highest life expectancy and lowest infant mortality rates in Latin America, with rates comparable to most developed countries (including the United States). This is despite health care spending in 2006 of only \$355 per capita, 7.1 percent of the gross domestic product (GDP); by comparison, the United States spent \$6,714 per capita, or 15.3 percent of the U.S. GDP, in that year [13].

Cuba gives us an example of "social engineering" at its most radical: a communist society where the individual's right to "make his living any way he wanted to," as our funder put it, is completely disregarded. It does indeed fly in the face of systems our country has long embraced, namely capitalism and free enterprise. This "social engineering" has proven remarkably effective, however, in providing access to high-quality primary care services to every Cuban at a very reasonable cost to the government.

State University's admissions and funding policies are hardly comparable with communist Cuba's. Nevertheless, arguments concerning these sorts of policies must ultimately address the question of what we consider to be the role of government in

our health. If we agree with the United Nations that health is a human right, we must support it with broad government policies to create equal access to care for all people. These policies must necessarily address the forces that move physicians-in-training away from primary care and towards lucrative (but costly to society) subspecialties. Thus, it is entirely justifiable to design programs that reward primary care physicians with financial incentives.

Rather than “social engineering,” I would argue that medical school policies aimed at recruiting physicians into primary care address the WHO’s call for “social accountability.” Policies like these, while unlikely to solve the primary care problem, offer at least a starting point for those students who want to serve their communities but find it hard to swallow the cost of their education. Moreover, the policy outlined in State U.’s proposal is remarkably accommodating to students who change their minds later in their training, offering an “opt-out” pathway to those who (like myself) come into medical school planning to be a primary care doctor, but become interested in another specialty along the way.

The United States’ current approach to health care is untenable, both financially and from a public health standpoint. Social accountability is no longer a matter of *noblesse oblige*, if it ever was. But the WHO notwithstanding, the word “social” has become something of a bugaboo in today’s political environment. Perhaps our funder who professes such a deep love for his state and country’s ideals would prefer a return to Flexner’s terminology. “Medical patriotism” has a certain “duty, honor, country” ring to it. The publication of Flexner’s report led to a massive restructuring in medical education and health systems, based on the needs of society at the time. I propose that as we face the next mammoth restructuring task, we return to contemplate Flexner’s own words. He writes:

The physician is a social instrument. If there were no disease, there would be no doctors.... Practically the medical school is a public service corporation. It is chartered by the state; it utilizes public hospitals on the ground of the social nature of its service. The medical school cannot then escape social criticism and regulation.... Such control in the social interest inevitably encounters the objection that individualism is thereby impaired. So it is, at that level; so it is intended. The community through such regulation undertakes to abridge the freedom of particular individuals to exploit certain conditions for their personal benefit. But its aim is thereby to secure for all others more freedom at a higher level [15].

Flexner was no Fidel Castro: he believed firmly in democracy and personal liberty. But his report reads as radical today, as much a call to action, as it was 100 years ago. To the outraged funder of State U. Medical School, I say: history sides with the state.

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CONLEY ESSAY

2011 Runner-Up Essay

Incentives for Medical School Students to Practice Primary Care through the Lens of John Rawls

Mariya Rozenblit

State University Medical School's explicit, community-based mission is to educate primary care physicians for its home state, which comprises mainly small towns and rural areas.

As its fortieth anniversary approached, State U. Medical School administration reviewed alumni data and realized that the school had not come close to fulfilling its mission. The school required those who received financial aid to complete residency in a primary care specialty within the state. If they did so—and most did—their loans were forgiven. But the alumni data showed that, over the years, an average of 60 percent of residents had gone on to fellowships in subspecialties immediately after residency, and many of those had moved out of state to practice.

As a corrective to this “mission slippage,” a new policy for state-funded loans and privately funded scholarships was proposed such that students who declared their interest in practicing primary care in the state and received full tuition from state or private sources had to practice primary care in the state for 10 years after completion of their residencies to repay the cost of their medical education. There was a sliding repayment scale based on service increments of 1 year for those who practiced primary care in-state but did not fulfill their 10-year service agreement.

Several of the school's private funders objected to the proposed policy; at least one was outraged.

“I've always supported our mission,” he said, “but this new policy is coercive. It's social engineering, is what it is. Flies in the face of everything this country and this state stand for. When my grandfather came to this state in the early part of the last century, a man could make his living any way he wanted to, long as he didn't break the law.”

“What's worse,” the funder continued, “is that this policy hurts the middle- and low-income kids. The rich kids don't need our support, so they can practice anything they want, anywhere they want.”

Response

The United States is currently facing a physician shortage of epic proportions. Estimates predict a 20 percent deficit in the workforce by 2025, with the majority of the deficit occurring in primary care [1]. The proportion of residents choosing to practice primary care has declined drastically from 54 percent in 1999 to 20 percent in 2008, suggesting that even the current projections may underestimate the extent of the crisis [2]. In light of the current data, it is laudable that State University Medical School is attempting to create incentives to recruit more medical students to primary care. However, despite its good intentions, in order to make a decision regarding whether the proposal should be implemented, one should first consider whether it is just.

John Rawls, one of America's leading moral and political philosophers, believed that justice is the primary virtue of social institutions. Since a medical school is a social institution, created to address the health needs of the public, justice is a standard by which the State University Medical School's policy should be judged. In *A Theory of Justice*, Rawls proposes guidelines for determining whether a social contract or agreement is founded upon the principles of justice. He defines the principles of justice as "principles that free and rational persons concerned to further their own interests would accept in an initial position of equality as defining the fundamental terms of their association" [3]. The initial position of equality is a hypothetical situation in which no one knows his class or socioeconomic status. Behind this "veil of ignorance," as Rawls calls it, everyone is in a similar situation, and therefore no one can design the contract or agreement in his or her favor. Without knowing how the contract will affect them, individuals choose a policy that benefits the greater good, creating a fair social contract. Rawls goes on to argue that individuals behind this veil of ignorance would only choose inequalities of wealth and authority if they resulted in compensating benefits for everyone and, in particular, for the least advantaged members of society.

Using Rawls's definition of the principles of justice to analyze whether the State University Medical School's policy is just, it is first necessary to decide whether the individuals involved in this agreement are free. If an individual feels that he has no choice but to accept an agreement, then the agreement is unjust. In this specific situation, the concern brought up by one of the school's funders is that economically disadvantaged students will feel coerced into choosing a primary care specialty in order to have their medical school loans forgiven. The assumption is that since these students cannot afford to pay for their medical school education, they have no choice but to practice primary care for 10 years, whereas rich medical students are free to choose any specialty.

The fallacy in this argument lies in the assumption that there are no other forms of financial aid being offered to these students. Besides the State University Medical School's loan forgiveness offer, all medical students are eligible to apply for need-based grants and loans from the government. Medical school students submit a Free Application for Federal Student Aid, which is used to calculate the expected family

contribution (EFC). Most medical schools cover the difference between the cost of education and the EFC with institutional grants, institutional loans, or federal loans [4]. Coercion implies a lack of choice, but there are other financial aid opportunities available to these students if they choose not to declare an interest in primary care.

If, despite these other financial aid opportunities, the cost of a medical school education were especially prohibitive to economically disadvantaged students, then it would be expected that these students would feel pressured to choose specialties with the highest salaries. However, studies have shown that, despite graduating with more loans, students from disadvantaged backgrounds are more likely to go into the lowest paying specialties—primary care fields. A meta-analysis of articles on choice of family medicine from 1993 to 2003 concluded that lower socioeconomic status is consistently associated with the choice of family medicine [5].

If those students chose primary care in the absence of financial incentives, then financial concerns do not appear to be the main deciding factor. They have either found other means of repaying their loans or are choosing a specialty regardless of their financial burden. Contrary to the funder's argument, then, it appears that economically disadvantaged students stand to gain most from this policy because they will receive a free medical school education in return for practicing a specialty that they would have chosen regardless of the financial incentive.

It could be construed as unjust that the University's policy binds these students to practice primary care for 10 years in the state. However, there is a legal precedent for assigning individuals to work in a certain area if they are receiving federal funding. The Emergency Health Personnel Act, signed into law in 1972, assigned civil servants to practice in underserved areas in return for loan forgiveness [6]. State Medical School has an explicit community-based mission to educate primary care physicians for its home state, and students accept the scholarships and loans knowing that their education is being funded in return for their practicing primary care in the state. It is therefore just to demand that the money be repaid if the students do not fulfill their part of the bargain. Should the doctors change their minds and decide to practice a different specialty or move to another state, the financial penalty imposed by the policy is not so great that it would prohibit them from doing so.

The financial penalty proposed by the university would occur after residency, when the individuals are earning their anticipated salaries. Repayment is on a sliding scale, giving the individuals sufficient time to repay their loans. The current maximum repayment term for Federal Stafford Loans is also 10 years. According to the AAMC's Medloans calculator, it is completely feasible to pay off the average medical school loan on the average salary of a primary care physician [7]. The financial penalty of the university's policy will not be any greater than the financial burden faced by all the other physicians paying off their medical school loans and therefore should not prevent anyone from choosing to pursue a different specialty or to practice in a different state.

Even if it is assumed that the university's policy does place an unjust financial burden on the physician who chooses not to practice primary care or chooses to practice in a different state, according to the principles of justice established by John Rawls, inequalities can be just if they benefit the least advantaged members of society. This idea of just inequalities can be found in U. S. government policies; in the graduated tax rate, for example, federal and state income tax rates are higher at higher levels of income. This unequal distribution of tax rates is justified according to the principle that the extra money is used by the government to build and maintain social institutions that benefit all citizens, including those who are economically disadvantaged. Analogously, if the university's policy is shown to benefit disadvantaged and underserved populations, the policy can be determined to be just despite its unequal burden on some physicians.

The benefit from the university's policy comes from the fact that the state is comprised mainly of small towns and rural areas. The severe shortage of physicians in rural areas is an especially serious problem because, in general, those living in rural areas have greater medical need, are older, and have higher incidence of diabetes and cardiovascular disease than their nonrural counterparts [8]. Primary care physicians represent the largest source of rural health care, and their numbers are expected to decrease; fewer than 3 percent of medical students who graduated in 2009 planned to practice in rural areas or small towns [9].

If State University's policy does place an unfair financial penalty on the physician who chooses to switch specialties, it is possible that more physicians will be dissuaded from leaving primary care, and the number of practicing primary care physicians in underserved urban areas will increase. Regardless of whether the physician sees the loan repayment penalty as a financial hindrance that limits his freedom to choose to practice in whatever specialty he desires, the university's policy is still fair and just, based on the benefits that will be gained by the underserved communities.

The university's policy meets the criteria for justice established by Rawls and should be implemented. Despite being just, however, it may not be the most efficient policy. It may not succeed in its mission of increasing the number of practicing primary care physicians in its state. A study investigating the National Health Service Corps, a similar loan forgiveness program that requires that individuals practice primary care in rural areas for a certain period of time, found that less than 40 percent of the physicians continued to practice in the rural area after completing their service requirement [10]. Although these programs succeed in recruiting more physicians to primary care, they don't necessarily increase retention. An alternative approach would be to create a special program within the medical school that is specifically designed to produce primary care physicians.

One of the theories about why medical students do not go into primary care holds that the unofficial culture of the school discourages that choice. Studies have shown that students who attend a school with a relatively low rate of graduates who enter

primary care fields are significantly less likely to, themselves, choose primary care as a specialty. A medical school with an official mission and curriculum to support the choice of primary care may harbor unofficial negative attitudes toward the specialty. Two studies have looked at the existence and impact of negative attitudes expressed unofficially by faculty, residents, and students during the process of medical education. Both studies found that a majority of students reported hearing negative comments about primary care and that a certain percentage of them changed specialties because of this [11, 12]. Therefore, even if the university's policy succeeds in recruiting more students interested in primary care to the school, they may not apply to primary care residencies when they graduate.

On the other hand, schools with a special pathway for primary care report higher proportions of graduates in primary care than in the conventional curriculum. Perhaps when students who are interested in primary care are separated from the rest of the medical school class and are taught by faculty who are especially passionate about the field, they are not exposed to an unofficial negative attitude and are not dissuaded from choosing primary care. In addition, students who participate in a special pathway have an opportunity to receive more exposure to, and to develop a deeper understanding of, the field.

Jefferson Medical College in Pennsylvania is a good example. Jefferson has a special primary care pathway (PSAP) in which students have family physician faculty advisors, take their required third-year family medicine clerkship in a rural location, and do their senior outpatient subinternship in family medicine. The program reports an 11-to-16-year retention rate of 79 percent for primary care physicians in rural areas [13]. Similarly, Mercer University School of Medicine in Georgia, founded with the explicit goal of graduating primary care physicians for rural areas, consistently reports that the proportion of its graduates in primary care is well above the national average [14].

Instead of altering its loan forgiveness program, State University Medical School should consider funneling its financial resources into creating a separate primary care program with a curriculum that focuses on educating students about health care in rural areas. Not only will these students benefit from the extra exposure to the unique clinical and resource challenges of primary care, they will also have the opportunity to meet inspiring mentors and fellow passionate students and to develop their own informed opinions of the specialty.

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CONLEY ESSAY

2011 Runner-Up Essay

Stuffing Mouths with Gold: Equitable Solutions to the Primary Care Physician Shortage

Bilal A. Siddiqui

State University Medical School's explicit, community-based mission is to educate primary care physicians for its home state, which comprises mainly small towns and rural areas.

As its fortieth anniversary approached, State U. Medical School administration reviewed alumni data and realized that the school had not come close to fulfilling its mission. The school required those who received financial aid to complete residency in a primary care specialty within the state. If they did so—and most did—their loans were forgiven. But the alumni data showed that, over the years, an average of 60 percent of residents had gone on to fellowships in subspecialties immediately after residency, and many of those had moved out of state to practice.

As a corrective to this “mission slippage,” a new policy for state-funded loans and privately funded scholarships was proposed such that students who declared their interest in practicing primary care in the state and received full tuition from state or private sources had to practice primary care in the state for 10 years after completion of their residencies to repay the cost of their medical education. There was a sliding repayment scale based on service increments of 1 year for those who practiced primary care in-state but did not fulfill their 10-year service agreement.

Several of the school's private funders objected to the proposed policy; at least one was outraged.

“I've always supported our mission,” he said, “but this new policy is coercive. It's social engineering, is what it is. Flies in the face of everything this country and this state stand for. When my grandfather came to this state in the early part of the last century, a man could make his living any way he wanted to, long as he didn't break the law.”

“What's worse,” the funder continued, “is that this policy hurts the middle- and low-income kids. The rich kids don't need our support, so they can practice anything they want, anywhere they want.”

Response

As the cost of an American medical education ascends to eye-watering levels (the mean indebtedness upon graduation reached \$158,000 in 2010 [1]), it is tempting to heartily embrace any action that promises to ease the financial burden on the nation's future physicians. Moreover, as increasingly urgent analyses predict massive shortfalls in the primary care workforce, exacerbated by the demands of caring for millions of newly insured patients under the Patient Protection and Affordable Care Act (ACA) [2], a scheme that offers to bolster the ranks of primary care physicians appears doubly attractive.

Yet the seductive proposal advanced by State U Medical School masks an unpleasant consequence—the stratification of young physicians on the basis of inherited wealth. The emergence of such a hierarchy rooted in socioeconomic status motivates the objection of the private funder presented in the scenario. In this essay, I seek to explore that objection philosophically. Doing so requires addressing two related yet distinct questions. First, on what grounds is this policy subject to *moral* scrutiny? Second, if this policy indeed turns out to be morally objectionable, do alternative options exist to fulfill the goals of the medical school? I probe the first question using the concept of “capabilities” to provide firm foundations for a moral protest. In response to the second question, I argue that this policy in fact fails to address the structural problems at the heart of the primary care physician shortage. Instead, I propose a path that attempts to harmonize with the ongoing shifts in health care policy and the implementation of the ACA.

First, to draw out points of objection clearly, I will briefly recapitulate the school's proposed policy. A key goal of this medical school is to graduate physicians who will go on to practice primary care medicine within the state. The school's administrators have attempted to achieve this aim by offering financial aid conditional upon students' remaining in the state as primary care doctors. They have discovered, however, that this approach has failed, as many graduates accept the financial aid but leave the state anyway and pursue more profitable subspecialties. To solve this problem, the school administrators have proposed a policy in which the amount of assistance in the form of loan forgiveness varies based on the number of years (up to 10) the graduate spends in primary care practice. The financial aid enforcement now comes with teeth.

To simplify the argument and sharpen the focus on the *moral* problem at hand, I make three general assumptions: First, the students are committed to practicing medicine, and State U Medical School is their only option. Thus, tweaking financial aid policies will not be sufficient to either drive students to another medical school or away from medicine altogether. Second, wealthy individuals, possessing the means to pay off loans without assistance, will reject a coercive policy and will choose whichever specialty they desire. Given the current trend of graduates from State U Medical School, greater numbers of these individuals will be likely to pursue subspecialties rather than primary care. Third, low- and middle-income individuals, facing a significant debt burden and lacking the family means with which to service

it, will most likely choose to pursue primary care. These assumptions are neither perfect nor rigid, but they provide a broad framework within which to assess the school's policy. The latter two assumptions essentially capture the objection of the private funder—the choice of a medical graduate's specialty becomes limited by economic means. Below, I explore that consequence, arguing that it is open to moral objection. Following that, I argue for an alternative approach that addresses the structural causes of the shortfall of primary care graduates and *incentivizes* rather than coerces medical graduates to pursue careers in primary care.

Though various philosophical tools are available with which to examine such a policy, here I focus on the concept of capabilities. Generally speaking, by capabilities I mean both the resources (understood expansively to include wealth, education, social status) *and* the ability (encompassing areas such as health, individual liberty, etc.) that an individual possesses with which to achieve his or her goals. Such an approach represents a marked shift away from thinking exclusively in terms of resources, exemplified by Rawlsian primary goods and, to a certain extent, utilitarian reasoning. A major benefit of using capabilities is that it also factors in an individual's ability to *convert* resources into achievable ends.

A comprehensive assessment of an individual's relative advantages and disadvantages is hardly a new idea. As Aristotle noted in the *Nicomachean Ethics*: “wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else” [3, 4]. Therefore, by focusing on the *capabilities* of individuals rather than purely their resources, we are able to capture a broader set of characteristics that allows us to more intelligently compare them. For example, an extremely wealthy yet physically handicapped person may, in comparison to an able-bodied, middle-class individual, possess far more resources yet lack the ability to convert those resources as effectively into achievements.

The concept of capabilities proves particularly useful in assessing the moral foundation of the medical school's policy. We may reframe the overarching question as the following: does the medical school's policy truly and disproportionately restrict the *capabilities* of one group of students to the advantage of another? Superficially, no. We may defend the policy on three major flanks. After all, the medical school is still offering the same basic resource to all students—a medical education. The school is not deliberately attempting to curtail anyone's capability to *convert* that resource into a successful career. Moreover, the available financial resources in the form of loan forgiveness are being distributed specifically to lower- and middle-income individuals. Therefore, if anything, the school is actually contributing toward an *equalizing* effect with respect to individual wealth. Finally, the school is not explicitly prohibiting anyone from choosing a particular specialty upon graduation. That certain financial incentives are being offered to nudge people in one direction or another is not equivalent to forcible compulsion. Students must simply be willing to accept the financial consequences of turning down conditional aid.

While reasonable, this defense ignores the fact that the medical school's policy represents a more insidious form of discrimination, one that becomes evident when capabilities are considered in a deeper sense. Based on the assumptions provided above, the school's policy effectively guarantees a general (though not perfect) stratification of medical careers on the basis of socioeconomic status. Critically, those low- and middle-income people who may have wanted to pursue a higher-paying subspecialty will be shuttled into a path that avoids initial debt but forgoes higher lifetime earnings. Not every student will follow this trajectory, but State U's experience thus far suggests that most will. In so doing, the school has subtly and specifically restricted the capabilities of poorer students to pursue their field of choice, and wealthier students are equipped with a significantly broader set of capabilities. A poor student graduating from State U is less capable of becoming a surgeon, for example. Though individual tolerance for inequality varies widely, this policy is demonstrably vulnerable to reasoned objection on moral grounds.

One key rejoinder, however, is that individuals from poor backgrounds will still be physicians (perhaps the first in their families) and will earn substantially more over their lifetimes than their parents. In effect, this line of reasoning concludes that some degree of *relative* socioeconomic inequality is acceptable because it provides advancement in *absolute* terms for lower- and middle-income individuals. The capabilities of poorer individuals are greater than those of their parents. Such an argument is fragile, because it not only permits and perpetuates an income inequality gap but also widens it. In 2010, the median compensation of radiologists and orthopedic surgeons was approximately \$350,000 [5], while that of primary care physicians was \$159,000 [5]. Though hardly a salary that will generate sympathy, these physicians still earn less than half of the income of certain subspecialized counterparts. While individuals from lower- and middle-income households *will* rise socioeconomically, this policy enables wealthier individuals to accumulate substantially more wealth and relegate poorer individuals to a lower income. Therefore, the school may be equalizing some resources, but the long-term capabilities of poorer individuals remain hobbled by this policy.

It is worth pointing out that not all (indeed, perhaps few) decisions of specialization are undertaken purely on the basis of financial compensation. Medical graduates continue to forgo higher salaries and pursue primary care out of a passion for serving neglected communities, the opportunity to build long-term relationships with patients and families, and the intellectual challenge of serving as gatekeeper to the medical specialties, requiring broad-based knowledge of medicine. Yet it is also true that, left unchecked, the shortage of primary care physicians will become increasingly critical. If the medical school's policy of "pushing" individuals into primary care is ultimately discriminatory, perhaps a policy of "pulling" will do the trick. We cannot deny the dismal maxim that economic incentives matter. Consider Aneurin Bevan's crisply world-weary description of how he successfully convinced Britain's senior physicians to sign on to the formation of the National Health Service—he had "stuffed their mouths with gold." Though most future physicians are motivated by the desire to serve, the altruism of graduates does not provide a sustainable strategy.

In the remainder of this essay, I argue for an alternative proposal that seeks to redress inequities on the basis of socioeconomic status while still promoting careers in primary care.

As a “pull” approach rather than a “push” approach, the idea is to boost the attractiveness of in-state primary care as a career. Much of the required action can be taken by the medical school and its academic medical center, though some will, of course, depend on the direction of health policy on a national level. First and foremost, while acknowledging the limited pot of scholarship funds available to the school, that budget should be redistributed purely on the basis of financial need. Rather than making funds contingent on an individual’s future choice of specialty, scholarship funds and loan forgiveness options should be disbursed in accordance with an individual’s ability to pay. This policy will solve the problem of economic discrimination but cannot be implemented in isolation because it may discourage the pursuit of primary care.

The larger problem, that of rebalancing the medical workforce toward primary care, is a structural one and requires more than patchwork initiatives. A sustainable solution demands more than punitive financial pressure—instead primary care must be reconfigured into an attractive path on similar footing with subspecialties. The medical school can take tangible steps toward achieving this goal while moving in accord with the changes in the American health care system arising from the ACA.

One of the boldest reforms set forth by the ACA is the promotion of accountable care organizations (ACOs), within which clinicians contract to deliver coordinated care, with the aim of eventually supplanting fragmented fee-for-service care with outcomes-based care, prioritizing quality over quantity of service. Such an approach, in theory, keeps people healthier by focusing on preventive care, in turn lowering health care costs. The formation of accountable care organizations is encouraged by allowing clinicians to share in the savings generated by this approach to care. It is important to note that the obstacles to accountable care are non-trivial—recent studies have demonstrated the substantial investment required of hospitals and physician groups in ACO pilot programs [6] and the large increases in reimbursement demanded by physicians to switch from a fee-for-service model toward an ACO model [7]. Yet with the familiar refrain of unsustainable health care costs, the question is not whether such reforms ought to be implemented, but whether they will be adopted swiftly, with sufficient freedom of action to tweak and adjust, or if they will be thrust upon a system ravaged by savage cuts in the future.

Given this narrow range of options, State U Medical School is well-placed to position itself as a vanguard for the changing model of American medicine. Over time, the hope is that individuals will become healthier, costs will diminish, and reimbursement rates for primary care physicians and subspecialists will move toward convergence. In such a scenario, primary care will begin to become a more attractive career option independently, but the medical school can implement its own solutions to accelerate this rebalancing. First, by incorporating as an ACO, the medical center

associated with the school will begin to change its own practice patterns, a transformation that will necessarily trickle down to students as they enter the wards. Students whose first exposure to medicine in their clinical clerkships includes coordinated care in which primary care physicians function as the “quarterbacks” will naturally begin to see career options differently from previous generations. Second, and more controversially, the medical school can adjust its own residency training plans, preferentially selecting in-state applicants for instance. Finally, the academic medical center can begin to alter its own incentive structures for faculty physicians to promote primary care.

Change will not come easily. But overall, the state and the nation would be well served by intelligent policies that solve the structural problems of primary care medicine *and* offer low-income students the opportunities of the wealthy.

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MEDICAL EDUCATION

Becoming a Doctor in Europe: Objective Selection Systems

Andreia Martins Martinho

Applying to medical school can be a daunting task in any part of the world. The admission process is, however, quite varied both among and sometimes within countries. In the United States, medicine is most often a graduate program that requires a prior undergraduate education during which medical school prerequisites are fulfilled. The criteria used by U.S. medical schools to select prospective students combine academic (undergraduate GPA and MCAT scores) with nonacademic factors (e.g., personal statement, interview, letters of recommendation, extracurricular activities). A similar mix of academic and personal criteria is used for placement in residency.

In Europe, where medicine has traditionally been a 6-year undergraduate degree, some universities have recently launched 4-year graduate medical programs, like those in the U.S. In Portugal such programs are controversial; the Portuguese Medical Association has publicly criticized them as “having controversial quality and being absolutely unnecessary” [1].

The criteria used by European universities vary from exclusively academic to combined academic and nonacademic criteria to the interesting “waiting period” in Germany. Such heterogeneity is also present in placement of medical graduates in residencies. The European countries that employ exclusively academic criteria for admission to medical school and residency contrast sharply with the U.S. While some criticize this purely objective system, there are also strong arguments in its favor.

Admission to European Medical Schools

Most European countries use exclusively academic criteria to select students for the majority of seats available in medical schools. This is true in Belgium, Finland, Greece, Italy, Poland, Portugal, Romania, and Spain [2-6]. According to information provided by Denmark’s Ministry of Science, Innovation and Higher Education, three out of the four medical schools in Denmark use students’ GPA from upper secondary education to place them in 90 percent of the available seats. The remaining 10 percent are admitted based on consideration of individual qualifications (personal communication with author, November 9, 2012). In the countries listed above, admission is granted to the applicants with the best combination of high school GPA and grades in the national examinations, normally in biology, chemistry, physics, and math. These examinations have little resemblance to the SAT or MCAT, inasmuch

as they consist of fewer, longer, and more complicated questions than the U.S. exams.

France uses an interesting variation of the described academic criteria. After high school graduation any person can enroll in medical school. All students take a competitive examination at the end of the first year, and those who perform best on the exam are allowed to proceed to year 2 of their medical studies and “are considered to be heroes, the victors of a ‘war’ that has defeated 9 out of 10 of their classmates” [6].

Other European countries, such as the United Kingdom, combine academic and nonacademic criteria to select their students. A 2006 study conducted by Parry et al. on 23 medical schools in England found that all medical schools combined academic and nonacademic criteria and only two did not interview candidates for admission [7].

Some countries, Germany and the Czech Republic among them, employ both exclusively academic and combined academic/nonacademic systems. In Germany, 20 percent of the seats are reserved for students who are in the top of their high school classes, and 60 percent of all seats are reserved for students selected according to the university’s own set of criteria, even though “universities are required to resort to final grades from school as the predominant admission criteria” [8]. And there is an interesting third path to medical school in Germany that “rewards the waiting time of an applicant”: the last 20 percent of the available seats are reserved for applicants who have waited a long time from high school graduation to get into medical school [8]. In this case, at least in the first stage, grades are not important as long as the student has a high school diploma. However, if the student decides to study another subject at a German University, “the years of study are not accepted as waiting time” [9].

The Czech Republic, in a procedure it shares with Hungary and Bulgaria, uses academic criteria for admitting citizens and both academic and nonacademic criteria for admitting international students, in order to attract foreign students who were not granted admission to universities in their home countries. For this purpose, some universities, such as the Czech’s Republic’s Charles University First Faculty of Medicine, offer medical programs taught in English, for which, unlike the programs taught in Czech language, students pay tuition (personal communication with author, November 1, 2012).

Residency

Selection methods for residency also vary. Most European countries, such as Germany and the Czech Republic, do not require an examination for admission to residency. The selection of “future medical specialists is made locally and by medical discipline depending on internship vacancies (or equivalent) in hospitals” [6]. Students are encouraged to apply to a hospital and are admitted to the available spots based on assessment of their skills, enthusiasm, and so on. In Belgium,

specialization is restricted to a limited number of candidates. To be eligible for specialization, students must have a training plan approved by the licensing commission for the specialty concerned [10]. In France, Portugal, and Spain, medical graduates sit for a vast national examination, after which they can choose their area of specialization [6]. While Spain's Examen Medico Interno Residente (MIR) can test any aspect of medicine, France's Epreuves Classantes Nationales (ECN) and Portugal's Exame da especialidade (EE) are restricted to certain preestablished topics. The latter only tests internal medicine topics.

Strictly Objective Systems

Access to medical education in countries such as France, Portugal, and Spain, in which both admission to medical school and residency are based exclusively on academic criteria, differs greatly from access in the U.S. It can be said that the quantitative nature of the system does not allow universities to evaluate skills other than excellence in theoretical knowledge. The critique is that the practice of medicine requires characteristics such as motivation, interpersonal skills, and the capacity to work under pressure that are better assessed in interviews, personal statements, and letters of recommendation.

The merit of using such nonacademic criteria to predict the suitability of prospective candidates for medical school or residency is, however, uncertain. The argument that medical schools should be able to select students with certain characteristics is weakened by the fact that "there is no absolute consensus on the characteristics medical schools should be seeking among future doctors—indeed, in a review of admissions processes in the U.S., Albanese et al. noted that 87 different personal qualities relevant to the practice of medicine have been identified" [7].

The reliability of nonacademic criteria such as interviews, personal statements, and letters of recommendation for the purposes of selecting the best candidates is also questionable. Research suggests that "unstructured interviews, characterized by a conversational, informal style, questions that are not specified in advance and a lack of objective scoring criteria, appear to be most commonly used among medical schools. This preference is quite surprising in light of the susceptibility of unstructured interviews to a variety of biases" [11]. In 1990, Edwards et al. noted that "studies of interviewers show that they are often biased in terms of the rating tendencies (for instance, leniency or severity) and in terms of an applicant's sex, race, appearance, similarity to the interviewer, and contrast to other applicants" [12]. The few existent data on the value of personal statements and letters of recommendation reveal that they have no predictive value in subsequent achievement [13].

The strictly objective systems are based on previous academic performance, which is traditionally regarded as a "good, but not perfect, predictor of achievement in medical training" [13]. A study conducted in Canada challenged this established idea. Its results indicated that the "traditional cognitive predictors have the most utility in predicting future academic and clinical performance," which were assessed

by the results in part II of the Medical Council of Canada's Licensing Examinations (LMCC), a sound measure of clinical skill [14].

A stronger argument against the sole use of objective systems, especially in the admissions to medical schools, is that it is only truly just in countries where major disparities in secondary education do not exist. On the other hand, an objective system such as this can be used as a tool to diagnose regional disparities in education—not just among those applying for medical education. Because tackling these problems requires time and major financial investments, one possible transitory solution to ensure equity is to establish quotas for the most problematic regions where the students who have the highest grades within those regions are granted admission.

Overall, provided that there are strict policies regarding confidentiality and student identification and that there is special consideration for disparities in education, this is a clean system in which the best students are awarded with the best academic opportunities. The selection process is fully transparent, merit-based, and with no room for subjectivity, which can eventually be used as a justification for biased or corrupt decisions.

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JOURNAL DISCUSSION

Expectations of Gender in Medical Education

Kevin McMullen, Matthew Janko, and Kelley Wittbold

Isaac C, Chertoff J, Lee B, Carne M. Do students' and authors' genders affect evaluations? A linguistic analysis of medical student performance evaluations. *Acad Med.* 2011;86(1):59-66.

In their recent paper, Isaac et al. [1] illuminated an intrinsic difference in the words used to evaluate the performance and behavior of male and female medical students. The investigators used a software program to categorize and analyze the text of deans' letters (MSPEs) for 2009 applicants to the Diagnostic Radiology Residency Program at Dartmouth-Hitchcock Medical Center. The results suggest an underlying and pervasive cultural expectation of the roles and behaviors of men and women in medical school. In their words, men were more likely to be described as “responsible excellers and eager beavers,” while women were “enthusiastic worker bees with research experience” [2]. Medical students will not be shocked by these results. We live in a world of constant evaluation and rapid turnover, where busy residents have little time to get to know us, and where evaluations often consist of stock phrases and broad comparisons.

Surprisingly, Isaac et al. found no author-student pairings in which the description significantly benefited or handicapped an applicant's chances of being ranked. These results suggest that, although a significant difference exists between the ways men and women describe male and female students, the qualities ascribed to women do not strike selection committees as more desirable than those ascribed to men or vice versa. Additionally, Isaac et al. noted that MSPEs written by men were significantly shorter than those written by women, though this difference in length had no effect on student rankings. In sum, this study identified gender-correlated differences in the language and length of MSPEs, but little effect on whether students matched to the Dartmouth program. These findings are interesting because subtle but significant differences in word choice seem to have little effect on tangible outcomes, analogous to the way that a drug that lowers LDL by 3 points doesn't necessarily reduce a patient's risk of MI. Despite this, the results allow for the discussion of an underlying gender-bias paradigm to be addressed using quantitative data.

As current medical students, we feel the effect of gender expectations on a daily basis. While male and female descriptors seem to have no effect on the likelihood of being ranked, they do reflect the environment in which we are immersed. In our lives, “enthusiastic worker bee” and “excellent eager beaver” are more than just word choices on MSPEs—they're standards to which we are held and to which we

mold ourselves over the course of 4 years of medical school. By the time we decide which residencies and specialties to pursue, we have undergone several years of slow and steady pressure to fit different ideals. Thus, while MSPE author-student gender combinations may not have affected Dartmouth's ranking decisions, it is possible that our culture of expectation and pressure influenced which students applied to which residency programs in the first place.

This crucial conclusion in Isaac et al.—that the genders of the MSPE writer and student subject did not affect ranking decisions—underscores the need to evaluate factors that influence medical students' career decision making. The investigators posit that subtle but clearly different social messages are conveyed to male and female medical students throughout their training, and that these messages contribute to unequal representation of men and women in various specialties. For example, nearly equal numbers of men and women graduated from U.S. medical schools in 2011 overall, but three-quarters of applicants to radiology residencies were male and four-fifths of applicants to ob/gyn programs were female [3]. While socialization may occur before medical school, the findings of Isaac et al. suggest that the culture of medical school may not be immune to these constructs.

Medical students consider job satisfaction, lifestyle, influential mentors, and a positive work environment when choosing a career. With respect to lifestyle, recent analyses of U.S. medical school graduates have revealed that men and women have nearly identical rates of migration away from careers with “uncontrollable lifestyle,” such as internal medicine [4, 5]. In our experience early and effective mentoring has shaped our understanding of the medical specialties and how we plan to build our careers. Both men and women reported experiencing gender and sexual discrimination during residency selection, as well as in medical school courses and clerkships and outside the medical training environment (mostly men entering ob/gyn and women entering general surgery) [6]. Women *report* more harassment and discrimination, but men weigh such experiences more heavily in their career decisions [6]. Our first recommendation is that the medical community would benefit from further research on medical students' evolving impressions of specialties, perhaps with nationwide longitudinal studies beginning in the first year.

It is necessary to consider the limitations of the study data: the study had only a small sample size and was confined to a competitive residency program in a competitive field. Many factors contribute to matching, and it could be that the selection committee at Dartmouth puts particular emphasis on specific qualities that are not included in the narrative of the MSPE. For example, earning honors in fourth-year radiology elective may have been valued more highly than the subjective impressions of students derived from their MSPEs. Such a restricted selection criterion would lessen the effect of gender differences in MSPEs on whether students were eventually ranked. Thus, it would be useful to repeat this study with an eye to less competitive programs and a broad range of fields. Our second recommendation is that a larger-scale study be conducted that includes more specialties and has a

larger sample size with greater power to detect differences in the proportion of ranked candidates.

If subsequent studies do identify such differences, our final recommendation is to develop a standardized protocol to help residency directors avoid being influenced by gender bias. One option would be to develop a subsection of the MSPE in which deans rate student character traits in a gender-neutral way. Isaac et al. suggested, for example, that women “showing enthusiasm” and men “taking initiative” probably represent the same character trait. These could be combined into a category like “go-getter: rate this student’s enthusiasm and initiative.” This would allow residency directors to read the nuance of the MSPE through the lens of a numerical character profile that helps to neutralize the effect of gender before the letter leaves the hands of the administrative author. A second option would be to use a software program similar to the language analysis software described in Isaac et al. to assign similar numerical values to MSPEs. Either of these approaches would provide additional standardization that could reduce the effect of gender bias in the success rate of applicants.

It is important that the medical community foster a culture of gender equality while appreciating the tendency of evaluators to choose their language according to the gender of the student being evaluated. We hope future research will elucidate factors that influence how medical students make career decisions, and if necessary, help to further standardize the evaluation and recommendation process.

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STATE OF THE ART AND SCIENCE

Assessing Noncognitive Attributes: The Primary Care Orientation Scale

Erik Porfeli, PhD, and Stephanie K. Fabbro, MD

Under the banners of “holistic review” and “mission-centered admissions,” medical schools across the nation are increasingly considering a broader array of student characteristics in constructing a student body to meet the missions of medical education and the health care needs of the public. Estimates from the American Association of American Medical Colleges (AAMC) and the American Medical Association suggest a growing shortage of physicians in the U.S., especially in primary care and general surgery [1, 2]. These trends in medical education and the health care system call into question traditional medical school admission policies, which tended to recruit an archetypal student on the basis of narrowly defined academic characteristics (i.e., MCAT performance and grade point averages), which may not be especially relevant in meeting the public’s need for primary care physicians interested in promoting patient health and well-being.

Changes in the aims of medical education and the health care system are outpacing the innovations needed to support them. The medical education establishment can make fairly accurate predictions of applicants’ future academic performance, using these innovations to select students who are likely to achieve academic success as indicated by course grades, completion of medical school, and passing the United States Medical Licensing Exams. The medical education system, however, lacks widely accepted instrumentation to predict such things as specialty choice, propensity to provide care to the medically underserved, future clinical competence with a diverse array of patients and contexts, and a number of other core characteristics needed to meet the missions of medical education and the health care needs of communities. While scientifically validated tools are emerging, it has not been clearly established to what degree medical education should apply these innovations to construct incoming cohorts of students and to socialize and train them thereafter.

Holistic review is increasingly being recognized as a philosophy that can be employed to account for not only students’ positive qualities but also society’s needs [3]. The AAMC defined holistic review as a “flexible, highly-individualized process by which balanced consideration is given to the multiple ways in which applicants may prepare for and demonstrate suitability as medical students and future physicians” [4]. Holistic review affords medical schools the ability to better meet such missions as admitting a culturally and economically diverse student body or graduating more students who enter primary care or other specialties in shortage areas. Groups such as the Innovation Lab with MR5 at the AAMC, which was

responsible for the changes to the fifth edition of the MCAT, support the concepts underlying holistic review, as indicated by their recommendations to seek out students who possess “dependability, respect, altruism, [and] empathy” and to develop validated methods to assess applicants’ personal characteristics as part of a centralized application process [5].

Typical medical school admissions efforts ask only informally about students’ specialty intentions and interests, and guidance efforts to assess specialty interest levels begin only after students enter the clinical curriculum. An attempt to get valid information about medical students’ specialty interests to inform the admissions process, the Primary Care Orientation Scale (PCOS) was based on previous research [6] and designed as a comprehensive, multivariate, multidimensional, open-source approach to predicting medical students’ specialty choices. The PCOS includes assessments of inventoried medical interests, personality characteristics, demographics, academic performance, and vocational identity, all of which may be correlated with specialty choice. It is meant to provide an indication of students’ predisposition to choose primary care fields at an earlier-than-usual point in their education [7]. The PCOS accounts for both expressed interests—the specialty a student states that he or she is likely to go into—and inventoried interests—scales of clinical activity interests that may be predictive of specialty interest or aptitude [6].

Studying Predictive Methods

Because scales that account for expressed interests tend to more closely mirror a student’s ultimate specialty choice than do inventoried interests [8], we investigated the association between the expressed and inventoried interests of students who had successfully navigated the admissions process and were pursuing medical degrees.

We recruited first-, second, and third- year students at a medical school in the Midwest via school e-mail to take part in the study. Each student had a private link to the survey, which was available online for a 2-week period. There were a total of 211 questions on varied topics such as biomedical and biopsychosocial interests, medical specialty identity, work values, financial aspects of life and work, personality characteristics, general abilities, and work and family role expectations. Examples of questions asked on the PCOS include:

1. Indicate how much you think you would like or dislike the following:
 - Using a highly detailed understanding of the body.
 - Providing primary care services.
 - Establishing close relationships with patients.
2. When I become a physician, it will be important for me to:
 - Have a predictable and stable work life.
 - Be recognized by others as being in a prestigious field.
 - Make a positive impact on the lives of those around me.
3. How much has your debt influenced your career decisions?
4. To what extent do you agree with the following statements?
 - Becoming a physician in my chosen specialty will allow me to become the person I dream to be.

- Thinking about choosing a medical specialty makes me feel uneasy.

After students took the survey, we added information obtained from the medical school database: student demographics such as age, sex, and ethnicity; academic data such as MCAT scores, USMLE Step 1 and 2 scores when applicable, grades (on an honors/pass/fail system); and any years of school retaken or leaves of absence.

Initial analyses of the data suggest that students' inventoried interests (survey items about medical activity interests) are stronger predictors of their expressed interests (anticipated specialty choice) than any of the other variables from the survey. However, the capacity of inventoried interests to predict expressed interests varies with certain student characteristics. Specifically, inventoried medical specialty interests were more predictive of expressed interests for students from medical families (e.g., parents who are physicians) and those who enrolled in accelerated BS/MD medical school programs than for students from nonmedical families. This suggests that the interests of some students from particular backgrounds and who choose certain kinds of medical training pathways may be more informed than those of their peers. This finding has implications for holistic admissions processes that bank on responses to such questions as "What medical specialty are you leaning toward?" by suggesting that the validity of students' responses may be shaped by their resources and choices.

The methodologies behind the PCOS have some limitations. They rely heavily upon students' perceived interests and their willingness to report their interests faithfully. While the early results are promising, we have not tested the validity and accuracy of the tool in indicating applicants' interests before admissions decisions occur, and testing on applicants is needed. Also, while the established association between inventoried and expressed interests is promising, the current research on the PCOS does not establish a relationship between interests and eventual residency choices, which will need to be investigated to ensure that the PCOS is predictive of behavioral outcomes.

Ethical Analysis

At this point it is difficult to assess the ethical implications of employing instruments like the PCOS in medical school recruitment and admissions. We believe that it is fair to assume that schools vary in their willingness to share their intentions with prospective students. While no known published research has examined prospective students' perception of such instruments, anecdotal evidence of those who have applied to medical school in the last few years suggests that at least some fraction of this group has been questioning the motivations that underlie the inventories and tests that they are being asked to undergo for the sake of entering medical school. Our experience suggests that some applicants have expressed concern about the rigor and validity of the methodology through which the scales are used to inform admissions decisions.

Unfortunately, revealing more to prospective students would make it possible for them to prepare for the tests, in essence stripping the assessments of their "blinding"

and, therefore, a large measure of their utility. Given the competitive aspects of medical school admissions, some students may necessarily feel inhibited to ask questions about the validity of the measures they are required to complete. However, because many of these scales are novel and students have little familiarity with the research supporting their use, they should be encouraged by admitting committees and teams to ask such questions and express concerns if they have them.

Our conclusion is that, when a school is employing mission-centric criteria to choose among students with satisfactory academic records, it may be ethical to take into account attributes such as specialty interest, emotional intelligence, communication skills, and diversity. We believe that this would be particularly true when the instrumentation assessing mission-oriented characteristics has strong evidentiary support from studies of applicants under the same conditions. We suspect, however, that many nonacademic mission-oriented instruments currently in use may lack such evidence, and we encourage medical admissions committees to seek the counsel of measurement experts before administering or continuing to administer such measures.

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STATE OF THE ART AND SCIENCE

Bias in Assessment of Noncognitive Attributes

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Professional competence for physicians, as defined by Epstein and Hundert [1], is:

the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served [2].

As implied by their definition, noncognitive traits figure prominently in Epstein and Hundert's discussion of physicians' professional competence. They cite attributes such as respect for patients, caring, emotional intelligence, teamwork, tolerance of ambiguity and anxiety, and basic communication skills as fundamental components of professional competence.

Although the importance of characteristics like those mentioned above is clear, it is quite difficult to assess the extent to which individuals possess them. Traits and skills related to providing humane medical care such as "caring" and "emotional intelligence" are much easier to recognize in practice than they are to explicitly define and measure. The crux of the problem is that traits and skills that develop over time through personal experience (i.e., learning-by-doing) in various social contexts can be difficult to express in words. They are often described as "tacit knowledge," i.e., knowledge and skills that enable one to perform certain tasks without necessarily fully knowing, or being able to explain, how one does it. Lam notes that in contrast to the type of knowledge associated with cognitive skills (explicit knowledge), tacit knowledge is personal and contextual [3]. Consequently, it is difficult to articulate, formalize, and share with others.

Although physicians' tacit knowledge enables them to recognize similar competence in others, there are two major drawbacks to overreliance upon tacit knowledge as the basis for admission and evaluation processes. First, physicians' tacit knowledge reflects their personal, perhaps idiosyncratic, understandings of the essential noncognitive traits and skills. These views may vary considerably among faculty. To be used effectively in admission and evaluation processes, these views would need to be synthesized and articulated as a shared vision of the medical school community. Secondly, because tacit knowledge develops through social interaction over time, it most likely contains outmoded beliefs and biases that hamper objective evaluation of others. A recent AAMC literature review described evidence of erroneous tacit knowledge in the form of unconscious gender or race/ethnicity bias [4]. The review

cited several studies showing that evaluators' awareness of gender or race/ethnicity caused them to mistakenly favor one equally qualified candidate over another. Thus, unchecked reliance upon tacit knowledge can result in biased recruitment and evaluation decisions.

Therefore, the central challenge in evaluating noncognitive traits is to leverage the useful portions of physicians' tacit knowledge into a common understanding of the most essential traits, while at the same time minimizing the influence of personal biases and irrelevant or mistaken information. Ultimately, if we are to select and develop physicians' capacity for requisite noncognitive skills and traits, we need reliable, valid, and transparent methods for measuring them.

In the following section, we outline strategies for refining organizations' processes to define and assess crucial noncognitive attributes. Effective use of research methods and data to move toward more explicit understanding of the desired characteristics and valid assessment of them is the guiding principle for this approach. The four steps are intended as elements of an iterative cycle to continuously improve processes for evaluating noncognitive attributes.

Improving Assessment of Noncognitive Attributes

1. *Develop more explicit definitions of the desired skills and attributes.*
Oftentimes the daunting task of developing precise definitions of learning outcomes is addressed by committees or task forces. To support such work, preliminary qualitative research methods (c.f., Denzin and Lincoln [5], Giorgi [6]) can be used to describe and analyze the tacit knowledge available among medical school personnel regarding their interpretations and understandings of the noncognitive traits needed for professional competence and how these skills and attributes can be recognized in practice.

Foundational research, like the above, can guide committees' deliberations as they seek to identify the most essential noncognitive traits and explore practical means for assessing them. Without locally developed research, members may struggle to articulate their tacit knowledge and get frustrated by the size and difficulty of their task. Under such conditions, committee members face the temptation of settling for the most easily defined and measurable traits rather than struggling to express and define the most essential ones. Research and conceptualizations can support efforts to make explicit their understanding (i.e., the "externalization" of tacit knowledge) of the desired attributes.

2. *Structure data collection to observe instances of the desired traits.* With a more explicit understanding of the desired noncognitive attributes, one can fine-tune the methods used to assess them. Assessment processes can be refined to elicit more revealing and relevant performances. Behavior-based interviewing [7] and the Multiple Mini-Interview [8] (for example, are

valuable approaches to consider for gathering more useful assessment information from applicants.

3. *Train raters/evaluators to use the system.* Better tools for assessing the desired traits will only improve outcomes if evaluators are trained and have the opportunity and resources to use those tools properly. Martell's research provides evidence of the importance of sufficient time, information, structure, and training for reducing the use of irrelevant information, including stereotypes and bias in evaluations [9]. Like most skills, practice and experience also seem to improve the quality of evaluations [10].
4. *Provide feedback to evaluators/raters.* When aided by thoughtful reflection and feedback on the accuracy of their previous decisions, one would expect that evaluators would reap even greater benefits from their experience. Toward this end, the Implicit Association Test [11] is one example of a resource that can help individuals identify sources of unconscious bias affecting their evaluations.

Although there are numerous types of feedback that could be provided to evaluators, here we describe an analysis that provided evaluators feedback on bias in their evaluations.

In a recent study at the University of Iowa, we analyzed 5 years of clinical performance evaluation forms for evidence of unconscious gender bias in the ratings of our medical students [12]. Our method involved examining whether the meaning of adjectives was affected by the gender of the student being rated. Within a factor analysis framework, highly intercorrelated groups of adjectives are interpreted as having a similar meaning; the common meaning for a given adjective grouping is represented by an underlying factor. If raters use the same meaning of the adjective regardless of the student's gender, then the expected pattern of intercorrelations and underlying factors among adjectives would be the same for men and women students. This hypothesis was tested statistically using Multigroup Confirmatory Factor Analysis (CFA). (See Brown [13] for an accessible description of this technique.)

From this analysis, we found that raters did, in fact, interpret the adjectives (i.e., "measurement models") differently based on the gender of the student being rated. These different measurement models resulted in gender-biased evaluations. Women were given more credit than comparable men for being "compassionate," "sensitive," and "enthusiastic," and men were given more credit than comparable women for being "quick learners." Thus, this type of analysis enabled us to raise evaluators' awareness of an unconscious bias evident in the pattern of their ratings.

In sum, physicians' tacit knowledge of vital noncognitive attributes provides invaluable raw data for developing, implementing, and refining assessment processes. As outlined in the steps above, qualitative and quantitative research

methods can facilitate efforts to externalize tacit knowledge, improve measurement processes, and correct implicit biases in judgments based upon tacit knowledge. Ultimately, however, it is physicians' reflective and judicious use of such research that will enable them to create increasingly meaningful and accurate processes for assessing noncognitive attributes.

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HEALTH LAW

Affirmative Action and Medical School Admissions

Valarie Blake, JD, MA

Are medical schools allowed to consider race and ethnicity in their admissions process? Since 1978 and the landmark case of *Regents of University of California v. Bakke*, the answer has generally been a nuanced yes, but the issue has been hotly debated again; the Supreme Court heard the latest challenge to affirmative action in higher education—*Fisher v. University of Texas at Austin*—on October 10, 2012. As *Grutter v. Bollinger*, the last high court review of this topic, was only a decade ago, speculation abounds about whether the court intends to overturn the status quo by banning race as a legitimate admissions factor [1]. This article will highlight the decisions of all three relevant Supreme Court cases and situate the debate about affirmative action within the context of medicine and medical education in the U.S.

Caucasian doctors continue to be overrepresented and Hispanic and African American doctors underrepresented in American medicine, but the issue of affirmative action in medical education continues to be litigated. Table 1 shows rounded percentiles of racial groups' representation in the general population, in medicine, and in 2011 medical school enrollment. While members of underrepresented groups are enrolling in medicine in higher numbers than occurred in the past (suggesting prospects for greater diversity in the future), the question of what constitutes adequate representation is an important one that the courts continue to struggle with: must the physician population be a perfect mirror of the general population, or should its inclusiveness be measured some other way? (More on this in the final section.)

Table 1. Representation of racial groups in the general and medical populations

	General population (2011) [2]	Physician workforce (2011) [3]	Medical student enrollment (2011) [4]
% Caucasian	63	70	60
% African American	13	4.7	7
% Latino/Hispanic	17	6.3	8
% Asian	5	16	22

Though some critique it for stigmatizing the disadvantaged and failing to adequately weight the unique experiences of individuals, affirmative action in higher education is lauded for generating a diverse educational environment, compensating members of underrepresented groups for past wrongs, and promoting equality of opportunity (“leveling the playing field”) [5]. In medical school, particularly, affirmative action

is credited with producing a diverse physician workforce in the U.S. and helping to foster cultural sensitivity in all physicians with an inclusive educational environment. Some also believe it reduces racial, ethnic, and geographic health care disparities, which they see as associated with an overly homogenous clinical workforce [5, 6].

Three major Supreme Court cases highlight what is at stake in the battle over affirmative action in medical school admissions.

Regents of University of California v. Bakke (1978)

In 1950, when the University of California's medical school first opened, all but three of its students were Caucasian (and the three were all of Asian descent) [7]. To help diversify its student body, the school developed two admissions pools—one exclusively for students from designated “minority” groups [7]. In the standard admission stream for 84 slots, all candidates with a GPA below 2.5 were excluded and those remaining were ranked based on interview, GPA, MCAT scores, extracurricular activities, and letters of recommendation [7]. The remaining 16 places were reserved for students who were disadvantaged or members of minority groups, who did not need to meet the 2.5 GPA cutoff and were not ranked against the candidates in the standard review [7].

A Caucasian student sued the medical school for discrimination when he was twice denied admission despite entrance scores significantly higher than those of other applicants accepted into the second pool [7]. Most significantly, the court upheld generally the right of schools to consider race as one factor in their admission process. They did, however, strike down UC's specific admission policy, which excluded white students from those 16 places, as unconstitutional and require it to admit the previously rejected student [7]. Some justices thought the policy violated Fourteenth Amendment equal protection rights which guarantee all persons “the equal protection of the laws” and others argued it was a violation of Title VI of the Civil Rights Act (1964), which bans racial discrimination by all entities receiving federal financial assistance [8, 9]. The basic principle of the *Bakke* decision was that, while schools cannot outright exclude anyone on the basis of race, they can use race as a “plus” factor that can be weighed in an individual's admission along with other salient factors like academics.

Grutter v. Bollinger (2003)

Twenty-five years later, the Supreme Court again upheld the general right of schools to consider race in their admissions policies. In *Grutter*, the University of Michigan Law School used race as a “plus” factor in its admission process, to ensure the enrollment of a “critical mass” of students from minority groups to achieve the educational benefits of a diverse student body [10]. The law school took a flexible approach to reviewing its candidates based on academics, talent, experience, motivation, and ability to contribute to a diverse student body [10]. In the latter, faculty considered broadly how a student might contribute to diversity, including factors beyond race or ethnicity alone [10].

A Caucasian student sued the school, arguing racial discrimination played a role in her being denied admission, but the Supreme Court upheld Michigan's admissions policy [10]. The law school was found to use race as a "plus" factor only, as one of a variety of positive admissions qualities [10]. Such efforts did not violate the Equal Protection clause because they narrowly considered race based on a compelling need to obtain educational benefit from diversity and, unlike in *Bakke*, the policy did not outright exclude any group or "preserve" a certain number of positions—the defamed "quota" system—on the basis of race alone [10]. *Grutter* is a model for how medical schools can constitutionally consider race in their admission policies, but the outcome of *Fisher* could change these standards [11].

Fisher v. University of Texas at Austin (2012-2013)

The latest case to shape the fate of affirmative action in school admissions concerns a policy in undergraduate admissions at the University of Texas at Austin [12]. UT Austin's intended goal in drafting the policy, as in *Grutter* and *Bakke*, was to improve the educational environment for students by increasing diversity [12]. Students can be accepted through two processes: (1) any Texas student in the top 10 percent of his or her high school's graduating class is automatically admitted, which accounts for approximately 85 percent of all admissions in a given year, and (2) for the remaining 15 percent of slots, race is a "plus" factor to be considered along with a variety of personal and academic achievements, as in *Grutter* [12, 13]. The policy has been successful at diversifying the student population—UT now ranks sixth in the nation for graduating nonwhite students, enrollment of African American students has doubled and Hispanic enrollment is 1.5 times greater than it was before the policy's implementation [13].

The current legal challenge to UT's policy began when two Caucasian students, denied admission under both pathways, filed suit alleging discrimination on the basis of race in violation of their Fourteenth Amendment right to equal protection [12]. Their claim has lost in both the federal district and appellate courts [12]. The Fifth Circuit Court of Appeals, the highest court to review it before the Supreme Court, reasoned that, like Michigan, UT considers race along with many other factors, evaluates students individually, and evaluates all students equally regardless of race [12]. Moreover, UT has carefully tied its affirmative action policies to its goal of diversifying the educational experience [12]. The Fifth Circuit Court cautioned, however, that it was not approving UT's policy for perpetuity—noting the dramatic increases in nonwhite students the "top ten percent" program was creating, the court noted that that policy may soon eliminate a need for the contested one [12].

The Supreme Court heard arguments on October 10, 2012, and will issue its verdict in this landmark case in the coming months. One question raised in oral arguments was whether those who brought suit have a right to do so and whether they have in fact been injured, given that they have since been accepted at and graduated from other schools [14]. It is unlikely, but conceivable, that the court could decline to give a verdict for these reasons.

Another question is whether the court might overturn all race-conscious admissions as unconstitutional or deal exclusively with UT's policy, which would have little effect on any other school [15]. This is related to the question of what constitutes "critical mass," or when a university should stop affirmative action admissions. One of the justices pointed out in arguments that the UT policy raised African American enrollment from 4 to 6 percent, but the state's population is 12 percent African American [14]. UT argued that comparison to the population should not be the measurement, because *Grutter* does not allow quotas [14]. One possible test for critical mass was whether the underrepresented group would feel isolated amongst the student body [14]. Additionally, the question of whether critical mass can be achieved through race-neutral policies was raised [14]. Justices also questioned whether focusing on race was more important than focusing on socioeconomic status for enhancing classroom diversity [14].

The decision in this landmark case will have significant implications for the composition of the medical profession and for higher education generally. More broadly, the Fifth Circuit Court's question is one that will undoubtedly receive more consideration in the coming decades: will there be a point when affirmative action is no longer needed or appropriate?

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POLICY FORUM

The National Resident Matching Program All-In Policy: Potential Consequences and Ethical Questions

Jennifer Saultz, DO, and Nathan Wright, MD

Lloyd Shapley and Alvin Roth were recently awarded the Nobel Prize in economics for their theoretical and applied work in matching theory. This concept was adapted and implemented by the National Residency Matching Program (NRMP) and has been successfully matching applicants with programs by prioritizing the applicant's choices rather than relying exclusively on programs' input. Pre-matches, traditionally used by programs to provide an incentive for desirable applicants for early matching, remain unpredictable and unreliable and lack standardization. They are seen by the NRMP to compromise the system by creating "inequities in how residency programs recruit U.S. allopathic senior students and other applicants and increase the risk of undue persuasion when residency programs offer positions outside the Match" [1].

The NRMP is now implementing an "all-in" policy, which will require every residency program to fill every first-year position either exclusively through the NRMP match or outside of it. Programs that continue to offer pre-matches will do so for all residency positions, outside the match. The impact of this new change on both programs and applicants is not yet known. Arguably those most affected by the policy include foreign medical graduates (FMGs), seniors in United States osteopathic schools, and the programs that rely on pre-matches to fill their residency positions. This paper will discuss some potential effects of all-in and the associated ethical dilemmas.

Upon acceptance of a pre-match, FMGs begin seeking their J-1 or H1-B visas. The early appointment allowed supplementary time to obtain visas prior to the internship start date. However, even with the pre-match, some FMGs still started late. With all-in matching, it is likely that the number of applicants requiring a delayed start date will increase because they must wait until they match to apply for visas. The impact of these delays is expected to be minimal in comparison to a resident's entire training experience. However, residency programs are already confronted with challenges to adequate resident training and all-in could make this more difficult. This raises several questions. First, is it okay to accept a matching system that will delay training for some residents? Second, if this is acceptable, where is the threshold between an acceptable number of affected residents and an unacceptable number? Lastly, is it okay to accept a system if it disproportionately affects a small number of residency programs?

The policies and rules set forth by the NRMP are justified by the fact that participation in the NRMP match is voluntary, and the program is designed to help protect applicants and residency programs. The decision by Saint Barnabas and New York Methodist to send applicants notice that they will no longer be participating in the NRMP match highlights the voluntary aspect of the program [2, 3]. It is unlikely that many programs, however, would be able to fulfill their own recruitment needs outside of the match. For those programs, it is not clear that the match is truly voluntary. Consequently, it could be argued that it is not truly voluntary for those who want to apply to those programs. One concern in this system is that residency programs and applicants who are pressured to participate in the NRMP match may also be pressured to violate rules in the future.

Survey data show that 37 percent of surveyed program directors with more than 10 FMGs residents oppose all-in, compared to only 25 percent of program directors with fewer than 10 FMGs [4]. The same survey noted that program directors were most concerned about the potential adverse effects of the policy on smaller, less competitive, nonuniversity-based programs. For smaller programs with greater dependency on FMGs and graduates of osteopathic schools, securing applicant commitments outside the match is often less costly than securing positions within it. Due to greater uncertainty about filling residency positions in the match, programs will either need to interview more applicants or try to obtain early commitments from those they select. The latter option is a match rule violation. That leaves smaller, less competitive programs, which often focus on primary care training, at a distinct disadvantage—at a time when we need more high-quality primary care physicians.

Concerns regarding the ability of small, community- and primary care-based residencies to fill positions may be further augmented by the impact of all-in on osteopathic student recruitment. While some osteopathic students apply to both the American Osteopathic Association match and the NRMP match, many have historically applied to AOA programs while interviewing out of the match at NRMP-participating programs. It is unclear if students in osteopathic programs will choose to participate in both the AOA and the NRMP matches. If they do not participate in the NRMP match, once again, smaller programs will be the ones that face the most significant challenges.

While the all-in policy strives to make the match program more equal for all participants, it is not clear that it makes the recruitment process more just for all programs involved. The effort to create widespread equity has the potential to lead to stronger residency programs and more satisfied residency applicants, but it does raise ethical concerns, and the policy will likely have unforeseen consequences. It will be important to monitor the ability of the programs most affected by this policy to manage the change.

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MEDICINE AND SOCIETY

Honesty and Fairness in the Residency Match

Justin M. List, MD, MAR

While most students will change during training, not every student will emerge from the training pilgrimage with a set of character traits that insures that ethical and professional standards are always maintained. This, in turn, places a heavy burden on those who help select medical students for admission to medical school. Medical school admissions committees do very well, but, sadly, there is no gold standard to identify with precision those students whose character flaws may prevent them from developing the kind of ethical and professional attitudes that society wants and demands of its physicians.

Mark Siegler [1]

Playing the Game

Professional self-regulation, rather than government regulation, is one of the unique aspects of medicine. Professional codes and ethical guidelines, such as the American Medical Association's *Code of Medical Ethics*, instruct members of the medical profession to act primarily in the interest of patients and society. Arguably, these codes and guidelines also serve to cultivate virtuous qualities in medical professionals that they then use to advance the health of individuals and society. Some parts of the medical training process, however, specifically medical school and postgraduate training recruitment, may actually undermine efforts to do this. From the moment a medical school applicant or medical residency candidate applies for the next stage of training, ethical challenges appear. Concerns that deceit and dishonesty have become commonplace in the residency match process raise the question of whether or not the current structure of residency recruitment promotes the virtuous qualities expected of those in the profession.

First, what problems exist? In the residency match process, postinterview communications seem to tempt both training programs and applicants to engage in duplicitous behavior. For example, a recent study reported that 1.1 percent of applicants to residency programs reported telling more than one training program they had ranked it first, and 59.9 percent of applicants to residency programs told more than one program that they ranked it highly in an effort to persuade those programs to rank them highly [2]. In the same study, 18.6 percent of candidates reported feeling assured by a program that they would match there (implying that the program had ranked them highly) and ranking that program first, but not ultimately matching there. When another residency program, which experimented with a policy against postinterview recruitment calls, surveyed applicants, 10.3 percent reported that they would have changed the program's place in their rank lists if they had

received a recruitment call from it [3]. Other problems include residency programs and candidates covertly entering into agreements outside of the match process and refusing to honor their matched selection [4]. D. Micah Hester argues that competitiveness fostered by the current match process undermines core values medicine places on working together to solve human problems [5].

Dishonesty, commitment-breaking, and misleading comments threaten the integrity of residency matching. The National Residency Match Program (NRMP) allows programs and applicants to express interest but prohibits the “solicit[ation of] verbal or written statements implying a commitment” [6]. Allowing these vaguely defined statements of interest may fuel what Dr. Karen Borman calls “playing the game” [7], which works against the traits of the virtuous physician the profession seeks to cultivate.

Why does it matter if people in medicine are “playing the game,” something that seems part and parcel of much of American life? It matters because it contradicts the medical profession’s mission and duty—to benefit society—and could compromise its integrity, based in part on the virtues I will discuss next. Philosopher Alasdair MacIntyre writes, “the ability of a practice to retain its integrity will depend on the way in which the virtues can be and are exercised in sustaining the institutional forms which are the social bearers of the practice” [8]. The medical profession is “a practice” in that it is a form of human activity that is partially defined by standards of excellence to achieve laudable goods [9]. Sustaining ethical thought processes and behaviors within the institutional form of the match and the practice of medicine in general requires some housekeeping in areas vulnerable to “game playing.”

Turning to Virtues

When someone speaks of a virtue, what exactly does that mean? MacIntyre explains:

A virtue is an acquired human quality the possession and exercise of which tends to enable us to achieve those goods which are internal to practices and the lack of which effectively prevents us from achieving any such goods....We have to accept as necessary components of any practice with internal goods and standards of excellence the virtues of justice, courage and honesty. For not to accept these...so far bars us from achieving the standards of excellence or goods internal to the practice that it renders the practice pointless except as a device for achieving external goods [10]....

The virtues...are to be understood as those dispositions which will not only sustain practices and enable us to achieve the goods internal to practices, but which will also sustain us in the relevant kind of quest for the good, by enabling us to overcome the harms, dangers, temptations and distractions which we encounter, and which will furnish us with increasing self-knowledge and increasing knowledge of the good [11].

The primary external good the match is intended to achieve is the “best” pairing of applicant and program to get residents the training they need to become competent physicians. Programs’ and applicants’ understanding of what constitutes a “best” fit are influenced by perceptions of consonance between the applicant’s personality and the program’s culture, the applicant’s qualifications, the program’s prestige, geography, and so on. A match process that allows dishonesty about ranking positions risks losing the internal goods to be had, including honesty and fairness. To protect these goods, the match process must be as fair and transparent as possible, which requires truthfulness and ethical action by programs and applicants.

When the medical profession accepts a “playing-the-game” mentality, it neglects an opportunity to reinforce holistically the virtuous behaviors it seeks in its medical trainees and physicians. In requiring professionalism (which is to say, ethical behavior) at some points—it is assessed during medical school and in postgraduate training—but not at others, the profession in essence treats ethical behavior as an instrument, only to be engaged in when it can achieve *external* goods for self or society. Allowing dishonesty in any form compromises the development of internal goods irrespective of the moral standing of the external goods to be achieved. MacIntyre argues, “Lack of justice, lack of truthfulness, lack of courage, lack of the relevant intellectual virtues—these corrupt traditions, just as they do those institutions and practices which derive their life from the traditions of which they are the contemporary embodiments” [12]. Although the moral gravity of dishonesty in the match process might not equal the moral gravity of a physician’s lying to a patient, allowing—or fostering—a fissure of unethical behavior in the internal practices of the medical profession puts at risk its overall character. Furthermore, it risks the trust relationship medicine has with society.

So why do participants engage in this behavior? Possibly because they recognize that “the possession of the virtues—and not only of their semblance and simulacra—is necessary to achieve [internal goods]; yet the possession of the virtues may perfectly well hinder us in achieving external goods” [13]. The behavior of both applicants and program staff indicates a concern that they must choose between internal and external goods, that they would have to sacrifice all other goods if they prioritized ethical behavior because of the way the system works.

This perceived choice could be eliminated by changing the rules and incentives of the match process. What changes might occur if the match process included more explicit rules guiding communication and actions between programs and applicants? One might expect that, instead of those who “play the game” successfully garnering the choicest spots, those who behave honestly would have an increased likelihood of securing them, thus facilitating standards of excellence for achieving internal and external goods. By prioritizing virtues in the practice of the match, the process could *reward* achievement and character.

In order to improve the “quest for the good” in the medical profession, we must bolster the ethical guidelines of the residency match. I suspect the gains from making

the match process more transparent and equitable by providing more explicit guidelines outweigh the losses. The perceived losses from applicants not going to their “best program” or programs not getting their “best candidates” do not justify turning a blind eye to dishonest behavior. Doing so works against the virtues the profession seeks to instill and grow in its professionals at a formative juncture in medical training.

Changing the culture of the match process might prove difficult, but the time to do so cannot come soon enough. As ethicist William May writes, “in professional ethics today, the test of moral seriousness may depend not simply upon personal compliance with moral principles but upon the courage to hold others accountable” [14].

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MEDICAL NARRATIVE

Selecting Medical Students, Then and Now

Samuel Shem, MD, PhD

Charity in the broad spiritual sense, the desire to relieve suffering...is the most precious possession of medicine.

Dr. Edward Churchill, 1947

Chiseled into the stone in the lobby
of the Massachusetts General Hospital.

In 1965, early in my senior year at Harvard College, I applied to Harvard Medical School. One of the toughest questions on the form was “Give a brief candid description of your personality.” I sweated over this for days, crafting every word. Having taken all the pre-med courses, I was also a major in “social relations,” which was categorized as “from society to mice.” I had started in psychology, but by that time I had made my way not quite to mice, but to cats: I was writing a senior thesis on the biological basis of learning and memory, going deeper down the reductive rabbit hole of science to the molecular level, looking at what biochemical changes had to occur at the synaptic junction in order to facilitate transmission—doing experiments on cats.

I was called for an interview. I had heard horrific stories about the main interviewer, Dr. Funkenstein—a psychiatrist who was known for “stress tests,” finding monstrous ways to intimidate the applicant, from total fluster to psychotic rage. One trick was to ask the applicant to open the window, which was nailed shut; another, to leave you alone in his office and have the phone ring, to see if you’d pick it up, or not—either choice was very bad. When I got there, alert for every move, he startled me with, “Who do you admire most, Einstein or Churchill?” I tried to stall, said I didn’t know. No luck. I took a shot: “Churchill.” He said, in a derisive voice: “Well, you know that Harvard Med is known for its science, not for social conscience—maybe you shouldn’t apply here?” The rest of the interview is a blank. Later, a friend who had answered “Einstein” said that “Dr. Frankenstein” had sneered and said, “Well, you know that Harvard Med is known for its social conscience, not its science—maybe you shouldn’t apply here.”

I did apply, was accepted, but delayed enrolling to go to Oxford as a Rhodes scholar. I started on the memory research—teaching cockroaches to lift their legs—but gave it up and began writing. Three years later, my choice was Vietnam or Harvard Med. I had to reapply, and came to the same “brief candid description of your personality.” With a bottle of Johnnie Walker at my side, I typed: “S.J. Bergman is helpful

friendly courteous kind obedient cheerful thrifty brave clean and reverent.” The Boy Scout Oath. Accepted.

Has the issue of how we choose doctors changed in recent generations?

Well, I hope we have moved on from the Frankensteins. The good news of the new generations: they are astonishing in their diversity, their worldview—so many have been all over the world, so that foreigners are no longer foreign, strangers not strange—they have done remarkable things in both science and society, they are so much less parochial and so much more culturally “mature” than my generation. The new majority of women doctors has brought astonishing changes: women are known as the carriers in our culture of care-taking, relationality, and empathic concern—these have had tremendous effects on our profession. Despite that, the new generation of applicants are kind of “super-achievers”—often stressed-out for the past 20 years in the unhappy “pursuit of happiness,” and often focused on the achievements of their own selves in our competitive society, the most self-centered society in the world. They have been on a narrow-railed conveyer belt of ambition and achievement. This brings a certain kind of competence, but at a price: a certain loss of the ability to engage in mutual, healing relationships. The “pursuit” may mar the “happiness.”

And that’s the bad news: this generation is the first “screen” generation: they grew up working at and communicating through computers and other electronic devices. There is evidence, now, of the effects of this on being able to do the most important thing any doctor does: to engage fully in mutual, healing, relationships.

It is not a matter of whether we are emphasizing scientific ability or social expertise. It is not a question of “character.” Character is a focus on “self.” For instance, we say that he or she is a “powerful” person—as if power resides in the self. The “relational model” that my wife Janet Surrey and I have written about (*We Have to Talk: Healing Dialogues Between Women and Men*) suggests that the main measure of psychological health resides not in parameters of the “self,” but rather in the quality of a person’s relationships. The key question is whether the quality of connection is “self-serving” or “mutually-serving” and empathic.

In this model, the “power” of a person does not reside within the isolated person—which often becomes “power-over” someone else. Rather it resides in “power-with.” For example, when two people meet—say for lunch—and have a great relational connection, both of the people come away feeling five good things: more zest or energy, more self-worth and sense of the worth of the other, more knowledge of self and other, a desire for more connection (“let’s do this again!”), and more empowerment to take action in the world. This enhanced power did not exist in each of them *before* the lunch meeting. Rather than the power being a quantity in each person, *the power co-arises in the connecting. In the process of meeting, empowering takes place, of both participants.* Think of a good relationship, say with a partner or spouse. When you are in a good connection, you can talk about *anything*; when you

are in a bad disconnect, you can't talk about *anything*. The crucial and first question is: what is the quality of the connection?

And what does this have to do with the new generation of doctors?

Again, the issue isn't whether a young doctor-to-be is a scientist or a social or community activist. That is an issue of the "character" of the self, and it is not the central issue. The central issue is the individual's capacity to create and participate in good (i.e., mutual) connections with others. So, for example, an interviewer might ask questions like, "What relationships are important to you? How would you describe the qualities of these relationships? How do you understand empathy, compassion, suffering? How do you manifest these in yourself or in those around you—your family or your friends? Are you able to manifest it around sick people, even disgusting or hateful or ungrateful people? What has been your experience with illness, in you and loved ones or others?"

I have often thought that rather than ask, on the "patient history," the question "How are you?" it might be more helpful to ask, "Can we talk about your suffering?"

Using the "we," which always helps, with patients, to reframe the encounter as not "I" the doctor or "you" the patient, but rather the entity of the relationship that exists in the room, called the "we." It is a shift from the "I/you" to the "we"; from the "either/or" of the scientific method to the "and"; from the "self/other" cultural paradigm to the "relationship" or the connection. I suggest to medical students and doctors that they simply try that experiment, using the word "we" as in "Can we talk about your (x)?" Or a surgeon might say, "We've done the tests; we have to talk about whether or not to have the operation." What one inevitably finds is that by using the word "we," you concretize the partnership, so that the patient starts to use the word "we" back at you. It announces and confirms: "There's a relationship here." And a good patient-doctor partnership is a key to good treatment, as well as to lessening the threat of litigation.

A new epidemic has arisen in college students. From 2005 to the present the incidence of death from binge drinking on campus has gone up almost ten times: now, 2,000 college students per year (5 per day) die just of alcohol poisoning—not counting the deaths from car crashes or other accidents (which brings the total to over 8,000). Why? No one knows for sure, but some of us think that it comes from the effects of being this "screen" generation. They have not had much practice in the face-to-face encounters of real relationships. When they get away from home and live in close proximity, especially to the other sex, they have a great deal of social anxiety and have to use booze (and drugs—especially "weed" and Ritalin) to handle the real meetings with others, especially across gender. Alcohol gives the illusion of connection, although in fact it disconnects you from real relationship. In AA, alcoholism is called "the disease of isolation."

This brings up the more crucial issue in medicine—and in life: the risk of isolation and the healing power of good connection.

A major mission of Janet's and my lives for the past decades has been our Off-Broadway play *Bill W. and Dr. Bob*, about the relationship between the two men that led to the founding of Alcoholics Anonymous in Akron, Ohio, in 1935, and of their wives, Lois and Anne, who founded Al Anon Family Groups. Writing it, we realized that there *had* to have been a doctor involved (Dr. Robert Smith, a surgeon from Akron, Dartmouth Class of 1902). Hearing from Bill Wilson, a drunk stockbroker from New York, that his doctor had told him alcoholism was a “disease,” Bob—a total alcoholic on the verge of dying—immediately said, “Then there must be a treatment.” What they discovered is a model for medicine—and for what we should look for in our applicants to be doctors. In Bill Wilson's words to Dr. Bob when they first met: “I realized that I alone couldn't stop drinking—and that the only thing that could keep me sober was telling my story to another drunk.” The essence of what works in AA is just that: understanding that no amount of self-will can keep you away from a drink; only asking for something *outside yourself*—another person, a divinity, a group, a “higher power”—can keep you sober. They went on to conceive of alcoholism as a disease with three elements—physical, psychological, and spiritual (not religious)—all of which had to be treated. This was the birth of the holistic movement in America in 1935.

The take-home message: what these two men discovered—the danger of isolation, and the healing power of good connection—is at the heart of all good medical care, in all three of those realms. And any good connection is mutual. As a medical student, if you have a good mentoring experience, you may think that you are the only one who is being helped, and even healed; in fact, the mentor is being helped, and even healed, just as much as you are.

Members of the younger generations are astonishingly accomplished—but often hindered by a focus of self-centered achievement and screen obsession and often less skilled in the give-and-take of forming, cultivating, and sustaining good mutual relationships. A horrific and expensive example (in terms of increased medical mistakes, both in diagnosis and treatment, leading to huge costs), is interviewing a patient with a computer screen between you, on a desk or in your lap or your hand. You make yourself a pretty dumb doctor, doing that. The good news is that there is an astonishing amount of information at your fingertips all the time and easily accessed—you don't even have to remember or try to recall it; the real joy of medicine, and the hard thing to learn, is not information or knowledge, but understanding. And you never forget what you understand. Think of your very first patient—if you didn't have a computer screen between you, you will recall, even 50 years later, every detail. If you did, you won't recall all that much. All solid memories in humans (not roaches) are seared in, permanently, by the emotion during which they were laid down. My generation recalls where we were when we heard that JFK was shot; all of us recall the moment of 9/11.

Except in the case of the population of dedicated medical researchers who go to medical school with little interest in a daily life in the clinical arena, the focus of our applicants—and of our non-Frankenstein interviewers—needs to be on the quality of the connections in the applicants’ lives so far and the vision of that quality in their careers to come.

In my most recent novel, *The Spirit of the Place*, about a young doctor going home to join his aging mentor in family practice, the doctor comes to a point of decision and hears a kind of voice inside saying, “*Don’t spread more suffering around. Whatever you do, don’t spread more suffering around.*” All of us humans suffer—as the Buddha said, in the First Noble Truth, it’s not optional. The question in us and our patients is not the suffering, it’s how we walk through it. If we try to walk through it alone, stand tall, gut it out, stay distant from our patients, they and we will suffer more and spread more suffering around. And if we walk through suffering with others, with caring others—and that’s where we doctors come in, that’s our job, to “be with” people at crucial moments of suffering—we all have a chance to suffer less, to not spread more suffering around, to reach some understanding and awareness, and to heal.

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OP-ED

Standardizing and Improving the Content of the Dean's Letter

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The medical student performance evaluation, known as the MSPE or dean's letter, summarizes a medical student's performance at the time of application for postgraduate training. In each medical school, considerable effort is exerted to produce this longitudinal account of performance. For the MSPE to be valuable it should serve as an objective and unabridged summary of the student's performance without obscuring or eliminating the very information that might predict difficulty in residency. The presently recommended MSPE format is the result of several calls over the last 20 years for standardization in reporting.

The AAMC convened an advisory committee to make recommendations to help standardize the structure and content of the dean's letter [1]. This effort was initiated because, despite previous calls for standardization: (1) there was a lack of uniformity among letters, (2) there was a need to assess professionalism, and (3) the value of the dean's letter in the GME community was declining. Ten years later, despite this call for standardization and uniformity, wide variability in what gets transmitted from the school to the postgraduate programs persists, and residency program directors still rank the MSPE as the least valuable of 16 academic selection criteria [2].

Has the Utility of the MSPE been Optimized?

There are many sources for the variability in the MSPEs that undermine its usefulness to residency program directors. Edmond et al. [3] compared 532 dean's letters with each student's transcripts to look for concordance between the two. They found that negative indicators such as a failing or marginal grade in a preclinical course or clerkship, a leave of absence, or a requirement to repeat the entire year of the medical school were omitted from letters 27 to 50 percent of the time. They concluded that some authors suppress negative information in their letters. More recently, in a study by Shea et al. [4], only 69 percent of MSPEs contained comments about student performance that were produced exactly as written. Only 13 percent of MSPEs had specific professionalism sections; the majority of comments about professionalism were imbedded in other areas of the document. Mentions of gaps in study, or leaves of absence, and adverse action against the student were infrequent. Moreover, despite the AAMC guidelines against including a final summary recommendation, 39 percent of MSPEs still did so.

Unique to the MSPE and not found in the transcript are the narrative descriptions of the student's performance during the clinical years. There is considerable variance in

the meaning of grading systems across schools. Alexander et al. [5] analyzed data from 119 LCME-accredited schools and documented eight different grading systems using 27 unique sets of descriptive terminology. There was great variability in the percentage of students eligible for honors among schools, ranging from 2 percent to 93 percent. In a single school, the correlation of descriptive terminology with use of the highest grade varied between 18 and 81 percent. Furthermore, regardless of AAMC guidelines, only 17 percent of MSPEs provided comparative class data [4]. This variance makes the job of the program director extraordinarily difficult. Durning and Hemmer [6] call for “more credible and transparent interpretation of what grades mean” within the institution. They called too for “honest and forthright” narratives that include information that allows the reader to understand the evaluation and grading processes.

Another factor that makes the MSPE less useful is the misuse of common words. Naidich et al. [7] reported that the word “excellent” was used by 75 percent of the medical schools. In some cases 65 percent of the students were classified as “excellent.” Some schools used the word “excellent” to characterize students in as low as the thirty-third percentile, while in others the term applied only to students at or above the ninety-second percentile. Naidich et al. concluded that the authors of the MSPE exaggerate the quality of their graduates, which diminishes the value of the MSPE for residency selection. Likewise approximately 34 institutions use the term “good” to describe students in the bottom half of the class [8]. Some schools characterize the bottom 25 percent as “good,” while others characterize students between the twenty-fifth and fiftieth percentiles as good.

Despite the variability, there is evidence that the MSPE can predict performance in residency. Lurie et al. [9] correlated the 4 categories of their MSPEs with the residency program directors’ evaluations for 2 consecutive years. They found that graduates in the bottom category, “good,” were likely to underperform in residency, while those in the “very good” category could underperform or over perform during residency.

In a study of performance predictors in an anesthesia residency program, Swide et al. [10] reported that program directors frequently question the accuracy of the professional behaviors reported in the majority of MSPEs, and maintain the belief that “the MSPE, in general, avoids ‘negative’ comments, rendering a section on professionalism inherently unreliable” [11]. Whether this is the result of the lack of a reliable tool to measure professional behavior or the school’s unwillingness to disclose information that would reflect poorly on the student or institution is unclear. Durning et al. [12] analyzed the graduates from their medical school to determine whether an appearance before the student promotions committee was predictive of performance during residency. Asking residency program directors to rate their graduates as “above average,” “average,” or “below average,” they found that students who appeared before their student promotions committee (regardless of the cause) were at higher risk of receiving below average performance ratings during the PGY-1 year.

Is Who Writes the MSPE Important?

Recently, questions have been raised regarding the authorship of the MSPE and its objectivity. Hunt argued that the role of the student affairs officer as student advocate could be in conflict with the intent of the MSPE as an objective evaluation document [13]. Schroth et al. [14] countered that student affairs officers are in the best position to prepare the MSPE because they have expertise in career counseling and are often the most knowledgeable about the student's academic achievements and extracurricular activities. We believe that the argument about who should write the MSPE misses the point. We agree with others that transparency in the preparation of the MSPE is critical [15]. Every school should develop and transmit clear, objective, and standardized criteria. Instead of focusing on who the author of the MSPE should be, the focus should be on the content of the MSPE and how that content is determined.

Given that the MSPE presents an opportunity to portray a student's longitudinal performance in medical school accurately, why does it fall short in so many cases? Tensions between accurate portrayal of performance and best residency match outcomes occur at the individual and at the institutional level. The authors of the MSPE want to portray their students in the best possible light. Students have worked hard not only to get into medical school but also to complete a rigorous curriculum, and traditionally that hard work has been rewarded. When a student's path through medical school has not been smooth, a truly transparent and accurate portrayal of a student's achievements may result in a less-than-desired outcome for that student. The school's allegiance to the student may contribute to the omission of certain performance data.

At the institutional level, a school's reputation may be influenced by the quality of the residency programs its students match to. Although there is debate about the value of the *U.S. News and World Report's* medical school rankings [16], many institutions care about their placement on this list. Twenty percent of a school's ranking depends upon its selectivity (the proportion of applicants who are offered admission); the school's ability to match its students into competitive residency positions encourages students to apply to it, which determines how selective it can be. So portraying students positively may benefit not only the student, but also the school.

Where Do We Go from Here?

In the last decade the public has demanded increased transparency about physician competence [17]. The Accreditation Council for Graduate Medical Education (ACGME) initiated its outcomes project. As Dr. Thomas Nasca, who led the ACGME outcomes project, stated, "our collective ability to assure the public and our residents that we have established specialty-specific educational outcomes and can demonstrate proficiency in those outcomes in our graduates will validate the public's trust in the graduate medical system in the United States" [18]. The American Board of Medical Specialties has also adopted the six ACGME competency domains and requires physicians to demonstrate competence for maintenance of certification [19].

Why should medical schools not adopt the same standards? The continuum of medical education begins with premedical coursework and extends through continuing medical education for the practicing physician. The development of competence certainly begins prior to residency. The Liaison Committee on Medical Education (LCME), the accrediting authority for medical education programs leading to the MD degree, has recently added standards requiring schools to educate and assess students along competency domains.

Many medical schools are transforming their curricular objectives and assessment systems to meet these standards. The advantages are numerous. Students have unique strengths and areas of weakness that, if targeted individually at the residency level, could result in more effective, individualized education. Students who cannot and may not ever meet the competency requirements could be identified early, facilitating an earlier exit from medical education [20]. Some of these competencies (professionalism, communication) are difficult to measure, making it even more imperative that deficiencies noted early in education are identified and targeted. This can only be achieved if there is transparent and effective transmission of reliable assessment information from the medical school to the residency program. The assessment of competence is certainly not a simple task. At a minimum we believe that each medical school should respect the obligation to faithfully transmit achievement in the six ACGME competency domains.

Given the conflicts that the authors and the institutions face, maybe it is time for the LCME to develop a standard that mandates accurate and complete disclosure of a student's longitudinal performance in medical school along competency domains. Ideally the MSPE will contain (1) unedited narratives of clinical performance that explain the evaluation and grading rubric (2), numerically comparative performance data (3) reporting of all issues of professionalism lapses, academic difficulty or lapses in training and (4) elimination of all "code" words in the summary.

Clearly other agendas may interfere with the intended purpose of the MSPE. The student wants to be portrayed in the most positive way for his or her residency application; the author(s) may wish to honor the student's effort and accomplishment; the institution wants to have a successful match to validate its selection of medical students and educational program; and the residency program directors wish to identify the "cream of the crop." However, the most important agenda is that of providing the public with the best-trained physicians, a goal that should supersede all others.

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Suggested Readings and Resources

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