

VIEWPOINT

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Does Medicine Overemphasize IQ?

Everyone wants the best physician. Patients want their physician to know medical information by heart, to possess diagnostic acumen, and to be well-versed in the latest tests and treatments. Finding the best physicians often involves looking for resumes with stellar attributes, such as having graduated at the top of a collegiate class, attended the best medical schools, completed internships and residency training at the nation's most prestigious hospitals, and been awarded the most competitive fellowships. Many medical schools, likewise, want only the smartest students, as assessed by the highest grade point averages and MCAT scores.

This selection process has persisted for decades. But is it misguided? Do the smartest students, as measured by science grades and standardized test results, truly make the best physicians?

Overemphasizing IQ

By prioritizing academic pedigree, the medical profession has traditionally overemphasized general intelligence and underemphasized—if not totally ignored—emotional intelligence. With “objective” assessments and little grade inflation, performance in hard science courses and on the MCAT have been the primary determinants of medical school admissions.^{1,2} Although good test

select students with higher scores to maintain their ranking. From 2000 to 2016, the grade point averages of students admitted to US medical schools have actually increased from 3.60 to 3.70,³ and MCAT scores in both biological and physical sciences have also increased by 5% to 10%.⁴ European universities may emphasize IQ even more in medical student selection, because they rely on standardized tests at the end of high school, such as A-level examinations in England.

Providing high-quality care certainly requires intelligence. A high IQ may help a physician diagnose congestive heart failure and select the right medications and interventions, but it is still no guarantee that the physician can lead a multidisciplinary team or effectively help patients change their behaviors in ways that tangibly improve their health outcomes.

The Ubiquitous Importance of Emotional Intelligence

A certain threshold of intelligence is absolutely necessary to succeed in any field. In medicine, IQ is necessary to master and critically assess the volume and complexity of information integral to contemporary medical education. But past this threshold, success in medicine is ultimately more about emotional intelligence.

Psychologists have identified 9 distinct kinds of intelligence, ranging from mathematical and linguistic to musical and the capacity to observe and understand the natural world.⁵ Emotional intelligence (EQ) is the ability to manage emotions and interact effectively

with others. People with high EQs are sensitive to the moods and temperaments of others, display empathy, and appreciate multiple perspectives when approaching situations.

Is EQ really necessary for success? A major part of what distinguishes human brain functions from those of primates is a larger prefrontal cortex and extensive intrabrain connections, which endow humans with significantly greater ability to navigate social interactions and collaborate. It makes sense, then, that humans should use this unique ability to its greatest extent.

Consider a simple negotiation session. Participants—executives, physicians, and others—are grouped into teams and given the exact same starting scenario and facts. When told to come to the best possible deal, as measured in a hard outcome such as the most money, results vary 4-fold or more. The best deals are reached by teams that exhibit mutual trust, an understanding of the interests of the other side, and the ability to reach a mutually beneficial arrangement. These variations are not the result of differences in brain power but rather differences in EQ. According to Diamond, “[In negotiations] emotions and perceptions are far

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scores and grades in calculus, physics, or organic chemistry may signal one kind of intelligence, reliance solely on those metrics results in an incomplete and inaccurate assessment of a student's potential to be an excellent, caring physician.

Medical schools often conflate high MCAT scores and grades in the hard sciences with actual intelligence. For instance, good test takers can score extremely high on multiple-choice examinations but may lack real analytic ability, problem-solving skills, and common sense. Scoring well on these metrics reveals nothing about other types of intelligences, especially emotional intelligence, that are critical to being an excellent physician. Knowing how to calculate the speed of a ball rolling down an inclined plane or recalling the Bamford-Stevens reaction are totally irrelevant to being an astute diagnostician, much less an oncologist sensitively discussing end-of-life care preferences with a patient who has developed metastatic cancer.

The prioritization of student grades and test scores in the *US News & World Report* rankings of medical schools fuels a vicious cycle. Medical schools have placed more emphasis on these criteria, ultimately striving to

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more important than power and logic in dealing with others. [EQ] produces four times as much value as conventional tools like leverage and 'win-win' because (a) you have a better starting point for persuasion, (b) people are more willing to do things for you when you value them, no matter who they are, and (c) the world is mostly about emotions, not the logic of 'win-win.'"⁶

EQ in Medicine

Vitally important to the success of 21st-century clinicians are 3 capabilities: to (1) effectively lead teams, (2) coordinate care, and (3) engender behavior change in patients and colleagues. (Both 1 and 3 require negotiating skills.) Thus, effective physicians need both an adequate IQ and a high EQ.

For the 10% of chronically ill patients who consume nearly two-thirds of all health care spending,⁷ the primary challenge is not solving diagnostic conundrums, unraveling complex genetic mutations, or administering specially designed therapeutic regimens. Rather, physicians caring for chronically ill patients with several comorbidities must lead multidisciplinary teams that emphasize educating patients, ensuring medication adherence, diagnosing and treating concomitant mental health issues, anticipating potential illness exacerbations, and explicitly discussing treatment preferences.

These activities depend on listening, building trust, empathy, and delineating mutual goals. Chronic care management, in addition to sufficient intelligence, therefore primarily requires a high EQ. As Goleman suggested, "Analytics and technical skills do matter, but mainly as 'threshold capabilities'—that is, they are the entry-level requirements for executive positions... [But] emotional intelligence is the *sine qua non* of leadership. Without it a person can have the best training in the world; an incisive analytical mind; and an endless supply of smart ideas; but he still won't make a great leader."⁸

Minimizing or ignoring EQ when selecting and training medical students may partially explain why US medical professionals fare so poorly in assembling well-functioning teams to care for chronically and terminally ill patients.

Enhancing EQ in Medicine

Efforts to select medical students based on EQ have been largely absent from medical school admission criteria. Why? Historically, admissions committees have focused too much on academic training and pedigree. McKee summarized the parallel situation in business: "We know from research (and common sense) that people who

understand and manage their own and others' emotions make better leaders.... One of the reasons we see far too little emotional intelligence in the workplace is that we don't hire for it. We hire for pedigree. We look for where someone went to school, high grades and test scores, technical skills, and certifications, not whether they build great teams or get along with others."⁹

Undoubtedly, EQ—like IQ—is at least somewhat genetic. Yet just as there are ways to improve general intelligence, so too are there ways to improve emotional intelligence. This suggests 3 important changes in 21st-century medical education. First, admissions committees must deemphasize IQ and increase the emphasis of EQ in the selection of medical students. This can be done by eliminating the irrelevant premed requirements of organic chemistry, physics, and calculus, while requiring training in psychology and leadership. The Icahn School of Medicine at Mount Sinai recruits a growing portion of its students from a humanities-oriented program known as HuMed. The undergraduates, generally English, history, and other nonscience majors, do not take the MCAT and are guaranteed admission to Sinai after their sophomore year of college. Studies have shown that these students are not only just as successful as medical students who were science majors but also are more likely to go into in-demand areas such as primary care and psychiatry.

Second, medical school admissions should incorporate explicit evaluations of EQ. An important first step has been the recent modification of the MCAT, which now includes a section on the psychological, social, and biological foundations of behavior. To build on this change, admission committees should also consider incorporating model negotiation sessions as part of the interview process. Alternatively, medical schools might use techniques to assess EQ such as the Emotional and Social Competency Inventory or behavioral event interviewing techniques.

Third, medical schools should include more training for their medical students, focused not just on managing myocardial infarctions or the genetics of hypertension but explicitly on enhancing EQ. Medical students should be taught how to listen to their patients, encourage behavioral changes, and coordinate with team members in clinical settings.

It is time for medicine to reduce its emphasis on IQ. If medicine hopes to identify and train a phenomenal next generation of caring, effective physicians who can lead multidisciplinary teams and induce patient behavior change, the medical profession must start by recognizing the importance of EQ.

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