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MEDICAL EDUCATION FOR CULTURAL COMPETENCE: POLICIES, INITIATIVES, AND STUDENT SELECTION

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Policies that govern professional education shape the character of professional practice in overt and subtle ways. Professional education policies are grounded in habit and historical precedent yet also have room for new ideas and fresh perspectives. In medical education today the primary approach to clinical education is still the hospital clerkship described by William Osler (1906) a century ago. This time honored educational method is now complemented by novel approaches including problem-based learning (Rothman and Page, 2002), simulation-based education (Issenberg, McGaghie, Hart et al., 1999), mastery learning (Wayne, Butter, Siddall et al., 2006), and early clinical experience (Dornan, Littlewood, Margolis, et al., 2006) that bring modernity and technology to medical education. Medical education in the early 21st Century combines tradition with new thinking, technology, and an emphasis on outcome measurement and accountability.

The U.S. medical profession, including its educational institutions, has been shaped by the same social, economic, and ideological forces that define the current national situation. Race has been and remains a key variable in the historical equation. Other writers (e.g., Cohen, 2003; Cohen, Gabriel, and Terrell, 2002; Ludmerer, 1985) have documented the sad history of medicine’s contribution to the legacy of racism in America from ignoring slavery to exclusionary medical school admission policies to the Tuskegee syphilis study scandal and beyond. The 1940s predecessor of the Medical College Admission Test (MCAT) contained questions about eugenics and ideas about racial differences that are absurd by today’s standards (McGaghie, 2002a). These are matters of historical record and cannot be changed. What’s different now is the stance of the medical profession and most U.S. medical schools over the past 30-40 years toward combating racism and reducing its legacy. Medicine and other health professions including nursing, pharmacy, physician assistants, dentistry, public health, veterinary medicine, and many others have assumed leadership in
addressing racism directly in their educational programs and especially in student selection (Brief of Amici Curiae Association of American Medical Colleges et al., 2003).

Other presenters at this conference will address different variables associated with Race, Human Variation, and Disease—genetic, biomedical, social, political, environmental (e.g., Burchard, Ziv, Coyle et al., 2003; Cooper, Kaufman, and Ward, 2003; Jorde and Wooding, 2004). These are beyond the scope of my contribution. The focus of this report is contemporary medical education—its social compact (Cohen, 2002), governing principles, several case examples, and [most important] the realities of medical school admission. My goal is to present a clear description of how race shapes medical school educational policies and affects student admission decisions.

I begin with two assertions. First, the medical education community—schools, faculty, administration, public and private funding sources—today is addressing racial disparities vigorously via many programs and initiatives. National policies and the behavior and curricula of individual medical schools make plain that recruitment, education, and career advancement of minority persons is a key goal of academic medicine. This educational policy position is aligned with scientists who champion fundamental research like the human genome project, public and private initiatives about the origins of life, and biopsychosocial inquiry free of ideology. Second, we need to acknowledge what it takes to become a physician—broad and deep fund of knowledge, work ethic, life experience, altruism, financial resources—and the competitive realities about who gets admitted to medical school and [with few exceptions] to the medical profession.

This report has two parts. The first part covers governing policies and initiatives that shape undergraduate and graduate medical education. These are undergraduate medical education accreditation requirements from the Liaison Committee on Medical Education (LCME) and graduate medical education accreditation requirements from the Accreditation Council on Graduate Medical Education (ACGME) that set minimum standards for education program operation. Medical schools and graduate residency programs simply cannot operate if they fail to fulfill these minimum requirements. Policy expectations from the Association of American Medical Colleges (AAMC), which contributes to both the LCME and ACGME, are also addressed. Several medical school examples demonstrate how racial disparities are being addressed directly via cultural competence curricula. Course content and educational delivery mechanisms are also described to inform readers about some of today’s best practices in medical education.

The second part tackles medical student selection. This is without doubt the most difficult problem to address on grounds of fairness and justice, defining readiness for medical education, economic and social outcomes of medical education, and
the public backlash toward affirmative action. Controversy about selective admission in medical education [and other health professions] creates tension that won’t go away. The tension will likely remain for many decades.

**Governing Policies and Initiatives**

The LCME is a joint body of the American Medical Association (AMA) and AAMC that is responsible for accreditation of medical schools in the U.S. and Canada. The LCME is a quality control mechanism. Medical schools simply cannot be started or stay in business without the LCME imprimatur.

The LCME judges medical schools, including their curricula, facilities, and faculty against a set of public standards (LCME, 2006). Here are two measurable accreditation standards that U.S. and Canadian medical schools must fulfill to stay in operation.

**“ED-21.** The faculty and students must demonstrate an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments.”

**“ED-22.** Medical students must learn to recognize and appropriately address gender and cultural biases in themselves and others, and in the process of health care delivery.”

Medical schools vary in the ways they answer these accreditation requirements via curricula (e.g., Eiser and Ellis, 2007), educational methods and technologies, student tests and evaluations, and faculty promotion policies. However, all 125 U.S. and 17 Canadian undergraduate medical schools must provide tangible evidence in service of these standards on a seven year cycle. There is a much shorter cycle for schools on probation.

The Northwestern University Feinberg School of Medicine, for example, has a required, comprehensive course about professional skills and perspectives titled, “Patient, Physician, and Society (PPS).” In the second curriculum year PPS has a 5-week block called Cultural Dimensions of Medicine that addresses health disparities, health care disparities, and the perspectives and biases that students may bring to their future roles as physicians. [Legislation has been introduced recently in the Illinois Senate—SB0558, 020807—that mandates, “. . . curriculum in each school operated in this State must include instruction in cultural competency designed to address the problem of race-based and gender-based disparities in medical treatment decisions.” The proposed legislation also extends to continuing medical education for practicing physicians. Future votes will decide if the proposed legislation becomes Illinois law.]

Graduate education in the 24 acknowledged medical specialties follows a similar pathway, governed by the ACGME. Graduate medical education operates
under auspices of hospitals and academic medical centers affiliated with medical schools and is usually not managed by the schools themselves. ACGME accreditation rules [effective July 1, 2004] addressing racial matters include several general requirements for all medical specialties. The graduate accreditation requirements are published on the ACGME website (2007). They include:

“The residency program must require its residents to obtain competence in the six areas listed below to the level expected of a new practitioner. Programs must define the specific knowledge, skills, behaviors, and attitudes required, and provide educational experiences as needed in order for their residents to demonstrate the following:

1. Patient care . . .
2. Medical knowledge . . .
3. Practice-based learning and improvement . . .
4. Interpersonal and communication skills . . .
5. Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds [emphasis added]

ACGME residency program accreditation policies that will become effective July 1, 2007 are much more specific. All graduate medical education programs must be responsive to measurable cultural competence issues in at least two of the six areas:

“Interpersonal and Communication Skills

Residents are expected to:
Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;

Professionalism

Residents are expected to demonstrate:
sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation”

Accountability in graduate medical education is addressed via a personnel evaluation policy that will affect medical trainees in all 24 specialties. The policy will be imposed on all graduate training programs. It states:

“The program must:
1. provide *objective assessments* of competence in patient care, medical knowledge, practice-based learning and improvement, *interpersonal and communication skills, professionalism*, and systems-based practice [emphasis added];

2. use multiple evaluators (e.g., faculty, peers, patients, self, and other professional staff);

3. document progressive resident performance improvement appropriate to educational level; and

4. provide each resident with documented semiannual evaluation of performance with feedback.”

These accountability steps are important due to the widespread recognition in medical circles that personnel evaluation mechanisms drive and channel trainee behavior (McGaghie, Downing, and Kubilius, 2004; Newble and Jaeger, 1983). Specific details about the educational measurement technologies that will be used to fulfill the resident evaluation mandate will evolve and sharpen over time.

The AAMC, chiefly through its Division of Diversity Policy and Programs, has several recent initiatives that address U.S. racial disparities and the acquisition of cultural competence among medical trainees. The AAMC website (2007) states a basic policy, “The Association of American Medical Colleges is deeply committed to increasing diversity in medical schools. This commitment extends to increasing the number of minority physicians available to serve the nation’s growing minority population, expanding areas of research undertaken by medical academics, and raising the general cultural competence of all physicians.”

An early expression of this policy was the AAMC’s 3,000 by 2,000 Project (Nickens, Ready, and Petersdorf, 1994) funded by the Robert Wood Johnson Foundation and the W.K. Kellogg Foundation. The goal of this 1990s Project was to double the number of minority (chiefly African-American) students enrolled in U.S. medical schools to approximately 3,000. The plan involved vigorous student recruitment; partnerships with public and private secondary schools, colleges, and universities designed to better prepare minority students for the rigors of medical school; and faculty development programs to improve teaching and boost cultural competence. The 3,000 by 2,000 Project fell short of its numerical enrollment goal for a variety of reasons. However, it did serve as a point of departure for other AAMC Division of Diversity Policy and Programs initiatives that operate today. Three initiatives are especially noteworthy.

First, the AAMC’s Aspiring Docs program targets minority undergraduate college students who express interest in a medical career. The AAMC website’s (2007) AspiringDoc.org link states, “The AAMC is committed to changing the face of medicine. By providing undergraduate minority students with better support, information, and guidance, we hope that AspiringDocs.org will help them say ‘yes’
to a fulfilling career in medicine.” In addition, “Our message must be that students, with the right information and support, can:

- Prepare themselves academically for medical school
- Afford medical school
- Successfully apply to medical school
- Succeed in medical school
- Enjoy a satisfying career as physicians and medical scientists
- Make a major difference in people’s lives and in their communities”

Second, the AAMC has created and implemented the Tool for Assessing Cultural Competence Training (TACCT) initiative (AAMC website, 2007; Betancourt, 2003). The TACCT is a self-report mechanism whereby a medical school can take a cultural competence inventory (biopsy) of its curriculum and student affairs program in five domains.

1. Cultural Competence—Rationale, Context, and Definition
2. Key Aspects of Cultural Competence
3. Understanding the Impact of Stereotyping in Medical Decision-Making
4. Health Disparities and Factors Influencing Health
5. Cross-Cultural Clinical Skills

One report about the use of the TACCT measure at one U.S. medical school (University of California at Irvine) shows that TACCT helps reveal cultural competence curriculum deficiencies (Lie, Boker, and Cleveland, 2006). However, a second report from UC-Irvine using qualitative research methods reports, “Students evaluated the informal curriculum as a more important source of learning about cultural competence than the formal curriculum” (Shapiro, Lie, Gutierrez, and Zhuang, 2006). This is reflected in the cultural competency training curriculum that has been developed and evaluated at that medical school (Thorn, Tirado, Woon, and McBride, 2006). The main point revealed from this and other work (McGaghie, 2002b) is that medical student diversity is a key curriculum feature, influential in-kind with reading, laboratory exercises, tests and examinations, real and simulated clinical experiences, and other medical school features. This idea is strongly and independently endorsed by students at another medical school (Hung, McClendon, Henderson, et al., 2007) adding external validity to the UC-Irvine findings.

Commissioned publications are a third noteworthy AAMC initiative that addresses racial disparities and education for cultural competence. One example is the June 2003 special issue of Academic Medicine (Vol. 78, No. 6) that contains three commissioned articles on cross-cultural medical education.

1. Betancourt JR. Cross-Cultural Medical Education: Conceptual Approaches and Frameworks for Evolution
2. Tervalon M. Components of Culture in Health for Medical Students’ Education


The June 2006 supplement to Academic Medicine (Vol 81, No. 6) is a second example titled, “Lessons Learned from the Health Professions Partnership Initiative.” The supplement contains a set of 17 articles that, “... describe programs developed across the country to increase the interest of grade-school and high-school students in medicine, and recount the challenges that were faced in implementing and encouraging these programs” (Whitcomb, 2007).

A third example is the February 2007 issue of Academic Medicine (Vol. 82, No. 2) that contains four commissioned articles on issues about increasing the diversity of the physician workforce. They are:

2. Freeman, Joshua, Ferrer, Robert L., and Greiner, K. Allen. Viewpoint: Developing a Physician Workforce for America’s Disadvantaged
3. Winkleby, Marilyn A. The Stanford Medical Youth Science Program: 18 Years of a Biomedical Program for Low-Income High School Students
4. Odom, Kara L., Roberts, Laura Morgan, Johnson, Rachel L., and Cooper, Lisa A. Exploring Obstacles to and Opportunities for Professional Success Among Ethnic Minority Medical Students

Publication of commissioned scholarly journal articles like those cited underscores the commitment of the academic medical community to boost the minority presence in the physician workforce and improve medical education curricula and teaching procedures on grounds of cultural competence.

In addition to national initiatives many U.S. medical schools have started local programs to increase the likelihood that minority students will matriculate and progress successfully. Two illustrations are given here. First, five University of California postbaccalaureate premedical programs “targeting underrepresented minority and disadvantaged students, with the goal of increasing the number of these students matriculating into medical school” are in operation at the Davis, Irvine, Los Angeles, San Diego, and San Francisco campuses (Grumbach and Chen, 2006). The programs feature application exercises that mimic the structured American Medical College Application Service (AMCAS) procedure used throughout the U.S. and rigorous curricula designed to inform and prepare students about the realities of medical education. Program evaluation results show that compared to a control group, “... students who participated in the postbaccalaureate programs had a higher probability of matriculating into medical
school.” In short, The programs are “an effective intervention to increase the number of medical school matriculants from disadvantaged and underrepresented groups.”

A second program at the University of Illinois College of Medicine at Chicago (Tekian, Jalovecky, and Hruska, 2001) aims to reduce the relatively high academic attrition rate among underrepresented minority students at that institution (Tekian, 1998). Students who received strong mentoring and advising were less likely to have delayed educational progress or withdraw from medical school than those who sought or received less faculty contact. An educational intervention as simple as faculty accessibility and contact can have a measurable impact on minority student progress and retention.

Reports such as these clearly indicate that national and local programs targeting underrepresented minorities can be successful at increasing their medical school matriculation and retention rates. The key, of course, is matriculation which begins with medical student selection.

Medical Student Selection

There is an annual competition in the U.S. for approximately 17,000 first year medical school class slots. The competition is stiff because about 36,000 people vie for the openings. To illustrate, in 2004-05, 35,735 persons applied to U.S. medical schools and 17,662 (~ 50%) were accepted. “Of the total number of Hispanic applicants, 48.8% (1,242 of 2,545) were accepted, and of Black applicants, 41.3% (1,160 of 2,802) were accepted” (AAMC, Division of Diversity Policy and Programs, 2005). Most U.S. medical school applicants apply to multiple schools. Some candidates apply at 20 to 30 medical schools. A diminishing subset reapply over several years if they are unsuccessful initially. Over time and repetition about 50% of those who apply to medical school in the U.S. are accepted sometime, somewhere (AAMC Division of Diversity Policy and Programs, 2005; McGaghie, 1990a).

Potential applicants who did not even bother to apply due to poor undergraduate college records or low MCAT scores are omitted from these figures. These persons exercise an individual decision in contrast with an institutional (accept-reject) medical school decision (McGaghie, 2002b). These figures also may not include the thousands of Americans who pursue medical education overseas—chiefly in Europe, Israel, and in the Caribbean—and later seek to enter the U.S. medical profession via graduate education and by passing a set of rigorous examinations that test language proficiency, medical knowledge, and medical skills (Educational Commission for Foreign Medical Graduates, 2007). About 25% of the U.S. medical profession enters the physician workforce through an international route.
I argued in a recent essay that medical student selection has short-run and long-run goals that still make sense (McGaghie, 2002b). “There are at least three short-run goals:

1. Medical students who have a high probability of completing the curriculum successfully should be selected for enrollment. It makes no sense to select students for medical education who lack the educational history, intellectual fitness, ambition, work ethic, habits and values, and personal qualities needed for success in school.

2. Prospective medical students should be evaluated for psychological fitness and stability, ruling candidates in and out according to valid indices of personal competence.

3. Medical students should be selected who fit or match school goals and who add value to the educational environment.”

The essay proceeded to argue that at least “...five long-run goals warrant attention.

1. Medical students and graduates are expected to serve the public, contributing to the fulfillment of national health care, preventive and policy goals.

2. Selection and education of students for medical careers should also promote the profession through a variety of outcomes: patient care, patient advocacy, research, philanthropy, teaching, and administration.

3. Selection results in the identification and training of individuals who will later advance basic biomedical, behavioral, and social science research.

4. Clinical and educational science also move forward due to the contributions of physicians who were selected from a candidate pool.

5. Medical student selection . . . [advances] the authority of the future, not the hubris of the past. Historical and current models for conducting medical education, care, and research will become obsolete and need replacement to accommodate the new science and technology [and social circumstances]. Appeals to history will not work in this rapidly changing environment.”

Nearly two decades ago I identified eight key issues embedded in decisions to select applicants to U.S. medical schools: three sets of consequences—educational, economic, social—the weak link between medical aptitude and achievement, class composition vs. stated intention, selection ≠ prediction, American core values, alternative definitions of merit (McGaghie, 1990a). The rest of this report will revisit and update each of these issues. A ninth issue will also be added: holistic, case-by-case vs. actuarial student selection. I conclude with a Coda.

1. Educational consequences. The decision to admit individuals to medical school is, with few exceptions, equivalent to a decision to grant them a
medical license. The overall attrition rate from all causes in the U.S. and Canada is approximately 1.4% (Barzansky, Jonas, and Etzel, 1999). [The attrition rate among minority medical students varies by medical school yet tends to be higher (Tekian, 1998)]. Overall, fewer U.S. and Canadian medical students are dismissed or drop out after they are admitted than would be expected on grounds of chance alone. For most of these future physicians the most important evaluative decision they receive is the decision to admit them to medical school.

2. Economic consequences. The economic sequelae of medical school admission decisions are also straightforward. Due to high success rates in medical school promotion and graduation, and subsequent licensure, an accepted medical school applicant’s economic security is virtually guaranteed. Despite wide variation by medical specialty and practice location, American physicians earn incomes about ten times higher than the typical American worker (McGaghie, 2002b).

3. Social consequences. Policy analysts argue that the high graduation and licensure rates, low attrition, and comparatively high professional compensation mean that the medical school admission decision contributes directly to the formation of a highly paid, high-status professional elite. In his book, Professional Powers (1986) sociologist Eliot Friedson asserts that a professional group achieves its influence in six ways: (a) taking collective action through professional associations; (b) exerting influence on state and federal legislation via powerful lobbies; (c) staffing advisory committees to government and industry; (d) holding government positions; (e) influencing product standards; and (f) influencing personnel standards for formulating policy on professional certification, licensure, and accreditation. Physicians simply cannot exert this influence unless they are first selected for education and training, move through the credentialing process, and become established in the medical profession. Under all circumstances, the first step is always medical school admission.

4. Medical aptitude-achievement link. Many individuals and interest groups have expressed concerns about the methods used to select medical students including writers who advocate increasing underrepresented minorities in medicine (e.g., Shea and Fullilove, 1985; Bergen, 2000). They often define their interests in terms of the results of selection (quotas, ratios, etc.) without giving much attention to the selection methods and their underlying principles.

Data from many studies over at least two decades show that the presumed link between aptitude for medical education (measured by MCAT scores and college GPA) and medical school achievement (measured by grades and USMLE examinations) is modest (Johnson, 1983; Donnon, Paolucci, and Violato, 2007). This “weak link” argument is
based on the magnitude of aptitude-achievement correlations, typically in the .30s and .40s, rarely reaching the .60s. This means that about 9% to 16% of the variation in student achievement (outcome) measurements is explained by variation in aptitude (predictor) measurements. Thus from 84% to 91% of variation in medical school achievement, measured by grades and tests, is due to unknown or unmeasured factors. In fairness, there are many possible technical and conceptual reasons for these findings: restriction of range, method variance, time lags, etc. Scholars also assert that despite these flaws, objective tests and college GPAs are still the best available predictor variables (Dawes, Faust, and Meehl, 1989; McGaghie, 2002a).

5. **Class composition vs. stated intention.** Individually and collectively, U.S. medical schools stress the importance of character, motivation, and other personal qualities as important factors to use in selecting students (McGaghie, 1990b). However, this intention is very difficult to fulfill chiefly because these attributes are hard to measure objectively and the use of interviews to probe such traits is notoriously unreliable (Stansfield and Kreiter, 2007). The upshot is that medical school classes are almost uniformly composed of students having high grades and test scores in the biological and physical sciences (70%), humanities and behavioral sciences (10%), other health professions (2%), mixed disciplines (8%), and unclassified (10%).

6. **Selection ≠ prediction.** Admissions officers and committees frequently confuse student selection with prediction of student achievement. The variables, and measures of the variables, used to select medical trainees may be neither conceptually nor psychometrically similar to the variables that predict medical school achievement. In addition, since virtually all matriculants ultimately graduate and are licensed for medical practice, the “outcome” for “prediction” is a fait accompli.

7. **American core values.** In medicine, other human service professions, and elsewhere in higher and professional education the measurement technologies in widespread use have clear-cut origins. The measurement technologies and the data they yield reflect the ideology of the society that develops them. In the U.S. this is seen in the nearly universal use of norm-referenced measurement in education, including medical education (McGaghie, 2002a). Two core values that underlie American culture—individualism and self-reliance, and competition—conform with using norm-referenced educational measures where individual achievement is judged in comparison with one’s peers.

8. **Alternative definitions of merit.** There are alternatives to the competitive approach to defining merit, and by extension, toward defining eligibility for selective admission, professional education, and professional practice. For
example, at the Ben-Gurion University of the Negev, medical students have been selected for decades according to a “threshold concept” (Antonovsky, 1987). After candidates demonstrate adequate cognitive potential, academic measures are ignored in the admission decision. Instead, personal qualities hold sway, traits judged by physicians and laypersons on the admission committee to be essential for medical practice. The committee looks for maturity, community service aspirations, wide-ranging interests, and racial and religious tolerance.

Customary definitions of merit—in this case, readiness for medical education—have limits. Relatively high college grades and MCAT scores are insufficient. The upshot is a conflict between the competitive ideology that underlies the American majority cultural heritage (shown by norm-referenced measurement) and an awareness in professional circles that attributes of character (evaluated subjectively) are also vital for professional education and practice (Cohen, 2002; Cohen, 2003; Cohen, Gabriel, and Terrell, 2002; Steinecke, Beaudreau, Bletzinger, and Terrell, 2007). Ideas about justice based on presumably fair competition, clash with notions of value, based on professional judgment.

These authors also point out that if medical student diversity is a goal of the academic medical community, race and ethnicity must be key selection variables that are weighted heavily. Steinecke and colleagues (2007) assert, “Of the four categories of race-neutral alternatives reviewed in this article [traditional measures of academic performance, socioeconomically based admissions, adversity indices, community-outreach-based admissions], none is a currently superior alternative to race-conscious admission programs. It is clear that an overreliance on traditional measures, such as MCAT scores, and considerations of socioeconomic status that do not include considerations of a candidate’s race or ethnicity, will have a negative impact on current levels of diversity in medical schools.”

9. Holistic vs. actuarial student selection. The U.S. Supreme Court ruled in 2003 in the Gratz et al. v Bollinger et al. and the Grutter v Bollinger et al. cases that affirmative action selection policies aimed at student diversity in higher and professional education are acceptable on constitutional grounds. The Court also ruled that “holistic,” “individualized” selection procedures, not “mechanical” methods, must be used to achieve student diversity goals. However, the weight of scientific evidence for over 50 years shows that actuarial procedures are superior to holistic, case-by-case procedures to fulfill a priori student selection policy goals fairly and consistently (Dawes, Faust, and Meehl, 1989; McGaghie and Kreiter, 2005).
Coda

Achievement of medical student diversity, a medical profession that mirrors U.S. population demographics, and a culturally competent medical workforce will not happen by chance. Progress toward these goals will only occur when medical student selection and evaluation policies focused on diversity are clearly articulated, evaluation benchmarks and timetables are set, and rigorous audits are done to ensure accountability. This assumes, of course, that the medical education community and the medical profession will maintain their advocacy of diversity goals and outcomes despite public pressure from many sources to preserve the status quo.
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