Medical School Admissions: A Raw Deal for Applicants

David Parks, a biology major who was graduated from Harvard College with a 3.4 (B+) overall average and a 3.0 (B) average in science, wanted to go to medical school this fall but was rejected by all nine medical schools to which he applied. He submitted applications to the three medical schools in his home state of Florida, in addition to Duke, Emory, George Washington, Georgetown, Louisiana State, and Tulane. "I applied to Southern medical schools that I thought I had the best chance of getting into," Parks said. "The Florida schools adjusted my 3.0 in science to a 3.3 because I had been at Harvard. They said they have so many applicants at 3.5 to 4.0 (A) that the only reason I was still in contention was that I had gone to Harvard."

Although it has always been difficult to get into medical school, Parks undoubtedly would have been admitted a few years ago. In addition to good grades, Parks scored well on the standardized Medical College Admissions Test (MCAT) and had good recommendations. Parks' adviser in his premedical course, a nationally recognized authority on medical school admissions, said that Parks "would have gotten in last year without any problem."

Although the number of medical school seats has increased by more than one-third since 1968, a sudden rise in the quality and quantity of applicants has rendered this otherwise startling growth inadequate. As to students entering medical school in September, there were 2.6 applicants per seat, compared to 2.0 applicants per seat in 1966 (Table 1). In addition, data from the American Medical Association show that the percentage of students with an A average who enter medical school has risen steadily from 12.7 percent in 1965 to 19.7 percent in 1970. No further national data will be available until this fall. But current statistics from George Washington, Georgetown, and Harvard indicate that the gradepoint averages and MCAT scores have continued to rise for the 1972 applicants and entering class.

There are several reasons for this imbalance of medical school seats and qualified applicants. For some young people, medical school has become popular for idealistic motives. The continuing war in Indochina and big business have turned off many young people who previously might have opted for other careers.

Although the health field consists of many other professionals and paraprofessionals besides physicians, these alternate opportunities have been inadequately publicized. Even when premedical students are informed of alternate health careers, they often insist on becoming physicians because of the greater prestige, income, and intellectual stimulation.

Competition from Ph.D.'s is another reason that medical school admissions are tightening up. Mark Rosenberg, an intern at the Massachusetts General Hospital who has written an article about medical school admissions to be published in the *Journal of Medical Education*, said, "The Ph.D.'s see medicine as an area in which they can do scientific research and still get money." Rosenberg pointed out that medicine is attracting not only persons with Ph.D.'s, but also college students who might have gone into Ph.D. programs if they had foreseen money for research.

The difficulty of being admitted to medical school also reflects trends in society dating back to the postwar baby boom. Daniel Funkenstein, director of the Program for Research in Medical Education at the Harvard Medical School, explained that the birthrate jumped significantly in 1948; compounding the difficulty, he added, is the fact that a higher percentage of the postwar babies went to college, where they had the option of studying the prerequisites for medical school.

Recruitment of minority students and women is filling more places in medical school than ever before (Table 2). One side effect of this recruitment is that rejection of previously borderline nonminority males is now more likely.

Idealism, the Ph.D. glut, the baby boom, and the recruitment of minority and women students have strained the admissions machinery at many schools to the breaking point. Accentuating the problem is widespread uncertainty regarding the direction that health manpower policy should take in the United States. Some medical schools are simply not sure of what their own goals should be. Stephen J. Miller, dean of admissions at Harvard, said that, to decide on meaningful criteria for entrance, medical schools need data bases on where doctors are coming from and where they are going. Miller complains that he has "never seen a group of scientists less able to apply their science to answer these crucial questions."

Instead of examining carefully what criteria each medical school should set for itself, there is a trend toward automatic screening of many applicants in order to pare the numbers down to a manageable size. Desmond O'Doherty, dean of admissions at Georgetown, said that this past year the medical school automatically rejected nonminority applicants who had both a grade point average below 2.8 and a score below 535 in the science section of the MCAT.

Table 1. Students entering medical school [Source: Association of American Medical Colleges]

First-year class	Applicants	Applications (No.)	Applications per individual (No.)	Accepted applicants	Ratio of applicants to acceptances
1966–67	18,250	87,627	4.8	9,123	2.0
1967–68	18,724	93,332	5.0	9,702	1.9
1968–69	21,117	112,195	5.3	10,092	2.1
1969–70	24,465	134,557	5.5	10,514	2.3
1970–71	24,987	148,797	6.0	11,500	2.2
1971–72*	29,200	208,925	7.2	12,350	2.4
1972–73*	35,500			13,500	2.6
1973–74*					

* Estimates.

The MCAT, which is required by almost every medical school, has been receiving continual, sharp criticism. Designed when medical school attrition rates were high, the test is supposed to predict performance during the first 2 years, when the core sciences are studied. Schools are now demanding as well an exam that predicts a student's suitability for the clinic. Harvard's Miller repudiated the MCAT as a "culturally determined and poor predictive test." But he added, "As schools go to pass-fail systems, the admissions committee needs some criteria on which to select its students. If we don't have grades, we'll use an unreliable test because that's all we have."

Medical schools continue to debate the value of an interview. In his forthcoming article, Rosenberg estimates that the real cost of admitting a class is from $544 to $1775 per seat at the four schools he studied in detail. "The interview is used very poorly at most schools," Rosenberg told *Science*. "They don't know what they're looking for, and they interview many students they don't have to." Nevertheless, as matters presently stand, an applicant has little chance of being accepted at most schools unless he is first interviewed.

Dissatisfied with the present system, those involved in the admissions process occasionally discuss two quite different approaches to admissions: a lottery for all qualified students and a computerized system of matching like that used for interns. August G. Swanson, director of academic affairs at the Association of American Medical Colleges (AAMC), said, "I don't think we'll see a national lottery at any time. It might be very fair, but it could raise hell in the local institution."

While medical schools puzzle over the technicalities of the admissions process, applicants and premedical students continue to suffer from the current doubt and disorder. Their frustrating experiences reflect the endless details of the medical school admissions process. Premedical students applying for admission are faced with a wide range of inconsistencies and inequities that they are in no position to handle.

Perhaps the most obvious problem for premedical students is the preference given to state residents at state schools and at private, "state-assisted" schools. Legislatures often enact aid bills requiring that a specific percentage of state residents be among those admitted. In many cases, this requirement is as high as 75 to virtually 100 percent. This writer, who is from Massachusetts, received strong residential preference for the 24 seats at the University of Massachusetts. In contrast, my roommate, who is from Ohio, received preference at the four Ohio medical schools, which together have nearly 500 medical school seats. Residents of Illinois get varying degrees of preference at six of the seven medical schools in Illinois. Residents of Western states get preference from the medical schools in Western states by agreement of the Western Interstate Commission for Higher Education. The arbitrary fact of state residency is intruding into the medical school admissions process to a serious extent.

Table 2. Recruitment of minority students and women. [Source: Association of American Medical Colleges]

First-year class	Minority students* (%)	Women students* (%)
1968–69	4.2	9.0
1971–72	10.3	13.5

* Note that women constitute a large percentage of minority students.

Another serious difficulty in medical school admissions is the heavy emphasis on a student's gradepoint average in science. Rosenberg criticized this emphasis on science grades and said, "If we're striving for general education in our colleges, we ought to reassess how well we're fulfilling this. I would probably weigh science grades less than they're weighed now. If you want premeds to develop broad interests, you have to realize you have the opposite effect by stressing performance in a narrow range of courses."

Medical schools, inundated by applications, do not, in most cases, have the time or the resources to determine whether or not applicants chose courses that were too easy for them in view of their previous preparation. Medical schools are looking at the grade received rather than at the difficulty of particular courses. This policy hurts the student who prefers to struggle and get a C in a tough science course rather than to breeze through a lower-level course with an A.

The costs of applying to medical school are staggering. A few applicants petition to have their application fees waived, but this is not feasible for the vast majority of students. Students entering medical school this year had to pay four fees in many cases: an initial application fee, final application fee, MCAT fee, and, perhaps most costly, transportation for out-of-town interviews. This writer, for example, applied to about 20 schools, went to five out-of-town interviews (plus seven more in the Boston area), and spent approximately $800 on getting into medical school. Students from the Northeast tend to file more applications than do sutdents from the rest of the country—for two reasons. First, there are few state schools in New England that offer preference, compared to the number in the Midwest. Second, schools in the Northeast include many of the prestigious medical schools, which are especially competitive.

Although an interview may be of some value to an admissions committee, it often does not help the student as much as he desires. I remember that three of my out-of-town interviews—at Emory, Pennsylvania, and Rochester—came during exam period last January. At Emory, five admissions officers (including two Emory medical students) interviewed three candidates, including myself, in a group session that lasted only 45 minutes. Rochester went to the other extreme, scheduling me for three individual interviews of 1 hour each. The present cost of applying to medical school clearly works against the student who is not poor enough to justify a fee waiver, but who is too poor to apply to and visit as many schools as he would like.

Theft of Lab Results

The premedical student too often falls into the trap of paranoia. Although this is not always the case, the tense atmosphere that exists in many science courses provides a backdrop for inconsideration of fellow students and, at its ugliest, manifestations of academic dishonesty. Last summer, the organic chemistry laboratory of the Harvard summer school became notorious for the number of lab results that were stolen. For example, a student could spend 5 hours purifying a solid and leave it on his lab bench for a fateful minute or two, during which the solid would disappear. Less drastic but more common is a spirit that pervades science classes: students are reluctant to help each other, afraid that they will give their classmates an important and crucial margin of understanding. This environment of students fighting each other in subtle and unsubtle ways is detrimental to academia.

It results from the fierce competition that currently exists in the applicant pool, along with the emphasis on gradepoint averages in science as a criterion for acceptance at most medical schools. The biggest danger from excessive competition is that it may create a student who is unlikely to become a humane and considerate physician.

The tensions of medical school admissions are exacerbated because most medical schools have no firm notification date and accept students on a "rolling admissions" basis. Three roommates and I applied for medical school last fall. One roommate, from Wisconsin, was accepted by his state school in September and knew during his entire senior year that he would be attending medical school the following year. The two of us from Massachusetts, including myself, were accepted in February. The fourth roommate, from Ohio, spent an agonizing year waiting for an acceptance until Ohio State notified him favorably in late May.

Premedical students are confronted with state preference, heavy reliance on science grades, the immense cost of applying, and a tension and sense of competition with classmates that can be excruciating. The challenge to medical educators is to eliminate many inequities in the present system and to define more clearly the type of student that should attend the various types of medical schools.

Of all the suggestions made for improving the current unsatisfactory situation, the plea most often heard is for more seats in medical schools. Medical school deans generally agree that the most economical way of creating more seats is usually by expanding current enrollments rather than by starting new medical schools. O'Doherty from Georgetown said, "Before a new medical school starts to contribute to the physician pool, there is a gap of probably 8 to 10 years." Harvard's Miller noted that more than 3300 foreign medical school graduates are being allowed into the United States annually. He said that, if one assumes an American medical education is superior to a foreign medical education, then U.S. medical schools should increase their enrollment by at least 3300.

Another improvement in the admissions process would be to reduce or eliminate state preference. The federal government currently provides medical schools with grant support. Some federal muscle should be flexed to ensure that students across the nation have an equal chance of getting into any American medical school.

Willard Dalrymple, premedical adviser at Princeton, cautioned at a meeting of admissions officers against the automatic gradepoint cutoff, which he said encourages students "to seek the easiest academic paths" and "teaches people false values."

As Rosenberg suggests, the interview should be used more restrictively, and medical schools should publish detailed statistics on the types of students they are accepting. The mechanics of medical school admissions would be further improved by establishing one date for notifying all applicants. Swanson of the AAMC said he hopes within the next 2 years to get medical schools to agree on a standard notification date in order "to reduce student anxiety."

The heavy flow of well-qualified people into the health field is a great resource that medical, educational, and government planners should utilize to the fullest. The challenge is to establish a more equitable system of medical school admissions, which means evolving a set of more relevant criteria by which to choose students. Medical schools should weigh more heavily applicants' motivation for applying to medical school and their personal attributes, such as compassion and general intelligence, instead of relying almost solely on gradepoint averages. Policy-makers should also make room for those rejected by offering and publicizing other rewarding and meaningful options within the field of health care delivery.—SAMUEL Z. GOLDHABER

Samuel Z. Goldhaber was a news intern at Science *in the summer of 1970. He graduated from Harvard College this June and will be entering Harvard Medical School in September.*

Lear Leaves Saturday Review

John Lear, the science editor of *Saturday Review*, resigned on 1 June to become vice president for communications of Bauer Engineering, a Chicago-based firm involved in environmental management.

For the last 16 years at *Saturday Review*, and previously at *Collier's Magazine,* Lear crusaded for various causes, including adequate government regulation of the drug industry and greater public understanding of the effects of thermonuclear war. Lear holds four major journalism awards and a number of other prizes.

Lear's departure signals the end of an era for *Saturday Review*, which was sold by McCall Publishing Company last year at a reported price of $5.5 million. The magazine, which has a circulation of 790,000 had previously been "in the vicinity of" breaking even financially. The purchasers were Nicholas Charney and John J. Veronis, the team which built up *Psychology Today* and then sold it to *Boise Cascade* 2 years ago at a price of approximately $21 million.

Instead of the monthly "Science and Humanities Supplement," one entire issue per month of the magazine will be devoted to science, says the new chief science editor, Alfred Meyer, who was brought in by Charney from the editorship of *Natural History*. "We are going to be drastically different from the old *Saturday Review*," says Meyer. "We are going to see science as an evolutionary adaptation." The budget for this project: $700,000 for the first year.

Lear says he was offered a post as a senior editor of the new, transformed magazine, but resigned because he liked the Bauer offer and because "I couldn't see where the new owners were going. In the past we had a great sense of social conscience in what we did. If these people had it, I didn't see it." These new owners say that the average age of the editors (Lear is 62) has been cut from 58 to 35; but among the notables of the last decade who are no longer on the masthead are one-time owner and editor Norman Cousins, poetry editor John Ciardi, art editor Katherine Kuh, and contributing editors Hollis Alpert and Goodman Ace.—D.S.