

MEDICAL EDUCATION

The Selection Process and Learning Environment in Undergraduate Medical Education

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The recent articles in the Bahrain Medical Bulletin by Dr. Akbar Mohsin and Dr. Najeeb Jamsheer on the subject of medical education, in which they invite comment, were timely particularly now that the Arabian Gulf University College of Medicine and Medical Sciences soon will be graduating its first class of students who have been exposed to the Innovative Problem Centred and Oriented Approach to Medical Education.

As they state, this education format is successful only when the student is a "self starter" and prepared to be responsible for much of his/her own learning. This is a one hundred and eighty degree about face from the traditional teacher centred educational process utilised in most pre-college systems, particularly those in the Middle East. The secret to the success of the problem oriented system is to select out those students who are most likely to adapt to this teacher-learner role reversal. How to choose those students, from the applicant pool, most likely to perform well has plagued admission committees for generations. One does not need to be a genius to be a competent physician, but it does require more than average intelligence and a mind

that is capable of processing information, deductive reasoning, and the ability to solve problems. Thus, as stated, high school grades are important, but only when examined carefully and by looking at several parameters. What courses were taken? Where did the student spend any "elective time"? How competitive was the high school environment? A grade of "A" in one school might be a "B" in another. Did the student demonstrate an inquisitive mind by taking on self directed projects? Were they followed to completion? All of these and other facets of the applicants previous performance have some predictive value.

What is available world wide which is objective, which is reliable, and which has been validated that can predict with reasonable accuracy future performance? In the U.S. over 90% of college applicants take either the Scholastic Aptitude Test (SAT), the American College Test (ACT) or both, as a pre-requisite to college entrance. The educational literature is replete with studies attesting to the value of such tests^{1,2,3}. Further all applicants to U.S. medical schools must take the Medical College Admissions Test (MCAT). Likewise the literature supports the reliability of the test to predict medical school performance^{4,5,6,7}.

There are available other methods for the selection of medical students. Sade et al.⁸ report on a set

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of eighty-seven essential qualities of a superior physician, their relative importance, teachability, and what they describe as the Nonteachable Important Index (NTII). Feletti et al.⁹ report on the admissions testing employed at the University of Newcastle, New South Wales, Australia.

The education of a physician is too long, too rigorous, too costly and too important to leave to less refined admission standards.

We must select and educate those students most likely to succeed and most likely to become competent, caring and concerned physicians. It is not enough to want to be a physician. One must possess those qualities and qualifications it takes to make a physician. In the problem oriented approach it is even more important.

The quality of medical care in any country is directly proportional to the quality of the people providing the care and to the quality of the education they receive.

Every system, traditional or non-traditional must with utmost care, and with all the tools available, select those applicants which meet predetermined standards for admission. Once admitted, it is then the responsibility of the system to provide the appropriate environment for learning. Here the most important ingredient is a faculty which is experienced in teaching, familiar with the system being used, interested in and excited about the students, and prepared for their own additional learning. Faculty should be selected with care to ensure these essential ingredients. To be a teacher one must first be a perpetual learner, confident and secure, yet humble enough to recognise and admit one's own weaknesses, be able to accept challenges, and to accept and adapt to new ideas and knowledge.

There is wide variation in the quality of education provided by medical schools through out the world, including those available to students from the Middle East. It is incumbent on those responsible for making the decisions, to select and approve those graduates only from schools which provide sound basic knowledge, and which have demonstrated the ability to assure the student an education which will prepare him/her for further training and specialisation.

The success and future of any system is dependent on the diligence and dedication of those responsible for it and those being moulded by it. It does not occur by accident, but can be predicted, based on planning, foresight and the amalgamation of all the essential ingredients or the lack thereof.

REFERENCES

1. Thurmond VB, Lewis L. Correlations between SAT scores and MCAT scores of black students in a summer program. *J Med Educ* 1986;61:640-643.
2. ATP guide for high schools and colleges, SAT and achievement tests. 1986-87 college board ATP, CN6200, Princeton, NJ. 08541.
3. Saunders BD, Paiva REA, Doolen DR. Using ACT scores and grade — point averages to predict students MCAT scores. *J Med Educ* 1986;61:681-683.
4. Jones RF, Thomae-forgues M. Validity of the MCAT in predicting performance in the first two years of medical school. *J Med Educ* 1984;59:455-465.
5. Jones RF, Vanyur S. MCAT scores and student progress in medical school. *J Med Educ* 1984;59:527-531.
6. Jackson JR, Brooks CM. Relationships among the MCAT reading subtest, Nelson-Denny reading test, and medical school achievement. *J Med Educ* 1985;60:478-480.
7. Markert RJ. Pre-admission academic predictions of the goals of a primary care — oriented medical school. *Med Educ* 1985;19:9-12.
8. Sade RM, Stroud MR, Levine JH, Fleming GA. Criteria for selection of future physicians. *Ann of Surg* 1985; 201:225-230.
9. Feletti GI, Sanson-Fisher RW, Vidler M. Evaluating a new approach to selecting medical students. *Med Educ* 1985;19:276-284.