

studied; for the USMLE Part 1, the average score was 79.3, and for the USMLE Part 2, the average was 78.2. Both numbers were well below the fiftieth percentile score of 82 for all test takers (U.S. medical graduates and IMGs combined).

We then considered the time and expense required to review these applications. We calculated that even the most experienced program administrator requires a minimum of five minutes to log in and screen each application, the equivalent of \$1.80 per application. Twenty percent of the applications were subsequently passed on to the program director for additional review, which consumed two minutes per application at a cost of about \$3.50. We estimated the cost of all the time required to process and review applications from IMGs this year to have been at least \$5,802.

On top of these initial costs were the costs in time and effort to handle post-match calls, which totalled 1,323 in the 24 hours after the 1997 match results were announced. Handling the calls consumed the efforts of five secretaries virtually full-time for two days. They also had to handle another 500 to 600 calls that came into the Office of Medical Education in the two weeks following the match announcements.

It has been estimated that between 8,000 and 10,000 IMGs enter the applicant pool each year, roughly the equivalent of applications from 55 additional medical schools beyond the 125 accredited U.S. allopathic schools and 17 osteopathic schools. If this is the case, then 23–29% of all IMG applicants in 1997 applied to the medical programs at Berkshire Medical Center. Of the 2,321 IMG applicants to our program, only one matched to a preliminary residency slot; the remaining ten slots were matched to U.S. medical graduates (USMGs). If the ratio of number of applicants to positions filled had been the same for USMGs, we would have had to screen the entire pool of USMG ap-

plicants—and we would have been one of the most competitive educational institutions in the world!

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### Abstract Length and the Dissemination of Knowledge

We wish to question the strict limitations on abstract length imposed by some leading scientific and biomedical journals. Various electronic bibliographic databases have set rather generous limitations on the size of the abstract field. MEDLINE, the National Library of Medicine's database, for example, sets an upper limit of 250 words. Longer abstracts appear incomplete, along with a "truncated at 250 words" message. Many scientific and biomedical journals, however, have much stricter length requirements. *Science*, for example, limits abstract length to 50–100 words for articles and 100 words for reports. *Nature* limits abstract length for articles to a mere 80 words. In contrast, *The New England Journal of Medicine*, *Annals of Internal Medicine*, *Circulation*, and other journals allow 250-word abstracts for articles.

The question of abstract length may seem, at first, insignificant. However, abstracts as they appear in electronic databases have an enormous impact on the dissemination of knowledge throughout

the scientific community. In the present age of electronic storage and retrieval, the title, abstract, and keywords of a manuscript are probably the most important factors in spreading new knowledge. Most researchers read regularly only a handful of periodicals, primarily relying on structured searches of electronic bibliographic databases to retrieve relevant citations. Only a fraction of the large number of articles whose abstracts are reviewed are later read in full.

We urge editorial boards to reconsider the strict limitations currently imposed on abstract length. Allowing longer abstracts would benefit both contributors and readers, and would result in broader dissemination of published scientific work.

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### Alleviating Students' Anxieties about PBL

I first encountered problem-based learning (PBL) when I and two colleagues visited McMaster University in the early 1970s to sample the new approach to medical education. We joined a group of students to observe and participate in the PBL process. I had the opportunity to talk to the McMaster students and gain their impressions of the program. Most impressions were positive, but one negative aspect emerged. The students told me that in their first encounters with PBL, they became very anxious because they were not given clear guidance with regard to how detailed their learning issues for each case should be, whether the objective was a definite diagnosis of the case, or how deeply should they go into the basic science underlying the case. As the students progressed in the program they