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CHALLENGES AND ISSUES IN MEDICAL EDUCATION IN INDIA

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Abstract

One of the largest in the world, the Indian medical education system produces several physicians who emigrate to the United States, the United Kingdom, and many other nations. Accordingly, the standard of these doctors has a wide global influence. Medical schools in India have proliferated exponentially in the last 25 years, doubling to a current number of 258 since 1980. The Medical Council of India (MCI) accreditation stresses facilities and resource documentation and does not provide self-study. The number of schools is decided by each state; the allocation of "payment seats" generating income in private medical schools, coupled with elevated emigration, which motivate an increase in the output of physicians. The selection of students is almost entirely based on entrance examination results, with a lower cutoff score for underrepresented minorities. For over 30 years, curriculum reform has been proposed, calling for the curriculum to be more important to the needs of the community. Revised guidelines from the MCI in 1997 supported these changes. Under the aegis of medical schools in India, the internship year (the fifth year, based on rotating clinical experiences) has suffered from a lack of supervision and minimal assessment; it is also used primarily as a time to prepare for residency entrance exams. In addition to better faculty development initiatives, the authors advocate broader use of the in-depth accreditation process used by the National Accreditation and Evaluation Board, currently available to just 10 percent of medical schools, as well as curriculum improvements, student selection, and internship assessment.

Keywords*: challenges, issues, medical, education, infrastructure.*

I. INTRODUCTION

One of the biggest in the world is the medical education system in India. It is made up of 258 medical schools, each connected to a university, producing 27,676 physicians each year. Every year, one third of these doctors leave India for residency training and/or practice abroad, with

around 1,500 medical graduates emigrating each year to the United States for residency training. Therefore, the standard of Indian medical education and of the doctors it creates has consequences for the United States and the whole globe [1]. With 0.5 doctors per 1,000 people (compared with 2.3 per 1,000 in the United States), the capacity of health professional education in India also has significant ramifications for health care in India, where the need is extreme (see the sidebar entitled "Health and Health Care in India"). In this article we describe the main issues facing Indian medical education today, and we offer suggestions for addressing these issues [2].

II. CRITICAL ISSUES

"In India, a nation with a long history of medicine, a number of high-profile issues deal with undergraduate medical education (see the sidebar entitled "Medicine in India: A Historical Perspective"). These include the restructuring of curricula (including the internship year structure, which is the last year of medical school), the emergence of new medical schools, accreditation requirements for all medical schools, the selection of medical students and the growth of faculty. Below, we discuss each of these issues and offer suggestions for addressing them [3].

III. CURRICULUM REFORM

Curriculum reform is the first issue facing medical education in India, with many demands for curriculum improvement having been made in the last 30 years. The Srivastav Committee, a group of educators commissioned by the Indian government, proposed the reorientation of medical education in line with national needs and goals in the mid-1970s, and suggested the creation of a reform-enforcement medical education commission. In 1986, the Bajaj Committee, another group commissioned by the government, repeated the call for an educational commission for health sciences and noted that although medical school faculty were effective in their clinical specialties, they were deficient as educators [4]. Linkage between curricular goals and the actual curriculum was stressed in 1993 by Kacker and Adkoli, who advocated updated course content, revisions in student assessment, and innovative teaching methodologies. To implement these changes, they suggested improving faculty development, establishing medical education units, making educational funding more transparent. These recommendations were reiterated in 2004 by Majumder6 in a government-commissioned report in which he emphasized the need for political commitment and leadership to achieve relevant, evidence-based medical education [5].

IV. CURRICULUM STRUCTURE AND RECENT REFORMS

The Medical Council of India (MCI), a governmental body under the Ministry of Health and Family Welfare established in 1934, must eventually approve any major changes to the Bachelor of Medicine and Bachelor of Surgery (MBBS) curricula. The MCI stipulates, in considerable

detail, the guidelines for the structure and content of the medical school curriculum. These rules start with the preclinical or first MBBS three-phase framework (12 months); the clinical or second MBBS framework (18 months); and the clinical or third MBBS framework (24 months) plus internship (12 months), a time devoted to rotating clinical experiences [6]. Mandated summative assessment for each MBBS phase is composed of external, or university based, examinations uniformly required for all medical colleges of the parent university (as many as 37 medical colleges in the case of Maharashtra University of the Health Sciences), as well as a small percent of internal, or medical school– based, assessment. The assessments consist of multiple-choice questions, modified essay questions, and oral examinations. Successful completion of each MBBS examination is required for advancement to the next phase of study. Passing standards for internal assessments are controlled by regulations of the parent university.

The MCI also controls the allocation of time between disciplines, the percentage of lecture time, the percentage of class attendance required, the types of electives and their duration, the distribution of internship components over time, and even the lunch break duration. In an effort to facilitate small-group instruction [7], greater focus on health and society, problem-based learning methods, and horizontal and vertical integration, these regulations for medical school curricula were significantly amended in 1997. Although vertical and horizontal integration is advocated by the MCI regulations, discipline-based teaching remains the predominant mode of education.

Medical education programs were increased from 4.5 to 5.5 years with the addition of an internship year in the 1960s, but the success of this innovation has been questioned.8 The addition of an internship year was partly a response to rising awareness of the need for resources devoted to community health, and it has a mandated 3-month community medicine block (half rural, half urban). Interns must also spend 2 months each in medicine, surgery (including orthopedics), and obstetrics and gynecology; month in casualty (the emergency department); and a half month each in family welfare planning, pediatrics, ophthalmology, and otolaryngology. Interns must also take two half-month periods of electives [8] .

The usefulness of the internship year has sadly been compromised by the nature of the evaluation and assessment system. After the completion of the third MBBS review, the internship begins. Towards the end of the internship, highly competitive 'pre-graduate' exams for admission to the limited number of residency positions in India are given. Since evaluation and supervision during the internship is always perfunctory, and a high score on the pre-postgraduate test is required to secure a residency position, students devote little effort to achieving the goals of the internship experience, instead spending most of their time preparing for the examination. Only 29% of medical school graduates (approximately 8,100) are able to enter postgraduate education positions in a clinical specialty in India, with another 10% qualifying for postgraduate education positions in nonclinical specialties such as anatomy, pharmacology, microbiology, pathology, or hospital administration.9 The remainder enter directly into general medical practice or emigrate to another country.

V. GROWTH OF MEDICAL SCHOOLS

The rising number of medical schools in India poses a second main challenge. The number of medical colleges in India increased dramatically in the 1960s and doubled in the last 25 years, with a total of 258 "recognized" or "allowed" schools in 2006. The number of schools continues to grow and it is possible that the new totals will be higher. In the number of schools, new private colleges account for most of the rise. Out of India's 28, over half of the new schools were established in four states, namely Maharashtra, Andhra Pradesh, Tamil Nadu, and Karnatakaa. . Although these states rank second, fifth, sixth, and ninth, respectively [9], in population, they already have ratios of medical school admissions to population well above the median. The considerable political strength of these states may be a factor in the disproportionate growth of medical schools there. The states and the MCI regulate the number of public and private schools, which may have led to some of the state variations in the growth of private medical schools.10 The sudden growth of medical schools in the country has also resulted in an increased need for medical teachers, with vacant faculty positions in many medical colleges.

There have been many issues with the lack of effective government regulation of private medical education and the private health sector in general, including the redistribution of resources in favor of metropolitan areas, and also the irrational use of medical equipment and facilities. "A privatization study recently found that "over-supply of physicians in the private health sector has also created unhealthy rivalry that has led to unnecessary or excessive prescription of otherwise healthy individuals." Medical schools in India must be connected to hospitals that treat particular numbers of patients, with private schools attached to private hospitals. Filling these private hospital beds is also difficult, which affects the ability of a school to comply with MCI regulations [10]. There is no shortage of patients in government-owned medical schools attached to public hospitals, as charges, all paid solely by patients, are considerably smaller than in private hospitals, and demand always far exceeds availability. The proliferation of private medical colleges also may be aimed at an export-oriented market, and the large rise in the number of medical schools may be motivated by the financial rewards offered by the high demand for medical education coupled with high tuition fees. Demand for medical education is so high that Indian citizens are attending medical school in Russia and, more recently, China.

VI. CONCLUSION

India's health education challenges include the rapid, inconsistent growth of medical schools, the dubious validity of student selection policies, curriculum targets that are weakly concentrated in the internship year on health care needs with major shortcomings, and a shortage of faculty creation to meet the needs of the increasing number of medical schools. We believe that limitations

produced by the MCI's comprehensive national regulations as well as state regulations from individual states, parent university examination requirements, and the presidency examination make reform of medical education difficult, despite the changes advocated by the revised 1997 MCI regulations. However, although in order to enhance medical education, institutional improvements in national and state evaluation and accreditation are important, reforms at the level of medical school are still possible. Our experience leads us to believe that curriculum reform, including a greater emphasis on bedside teaching, should emphasize social and clinical context. Improved vertical integration through the curriculum's problem-based organ system design may also help tackle this problem. Formative student evaluation of the primarily summative tests should be added.

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