

## Introducing a New Medical School System into Japan

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### Abstract

Entering into medical schools is the most difficult yet most prestigious among all of the undergraduate university departments. Most of the medical students in Japan come from the Mathematics/Physicochemical Science track, while a few are from the Humanities/Social Science track. However, to meet the needs of the Japanese society, medical students need to learn core competencies, such as professionalism, humanism, and ethics. Issues with regard to these competencies among medical students have recently become a widespread serious concern to medical educators and the general public in Japan. In this article, we suggest that the introduction of a new medical school system, by reforming the admission criteria, can be an effective measure for meeting the current needs of the Japanese society.

Ann Acad Med Singapore 2008;37:800-2

**Key words:** Admission criteria, Core competencies, Medical students

### Admission to Universities in Japan

In Japanese universities, high-quality educational opportunities are controlled by meritocratic entrance examinations.<sup>1</sup> Performance in the entrance examination is the key determinant to university admission. Other criteria, such as high school grades, teachers' recommendations, extracurricular activities, community services and personal character, are usually not considered as important in the admission process.<sup>2</sup> Thus, university entrance examinations exert a dominant influence on high school students.<sup>3</sup> No single event determines the course of a young person's life as much as the university entrance examinations and nothing requires as many years of planning and arduous work.<sup>3</sup> Recently, the intensity of preparation for entrance examinations has severely escalated. Preparations now begin at a much earlier stage in a young person's life and would require prolonged and institutionalised training at private preparatory schools outside conventional schools.

However, as socioeconomic disparity increases, with a growing subpopulation of the "working poor" in Japan,<sup>4</sup> there is growing concern regarding the unequal and unfair opportunities for children or young persons to pursue higher education. Wealthy families place their children in examination-oriented private high and junior-high schools as well as private elementary schools, whereas children of poor families have no choice but to go to public schools with a lower record for passing examinations and thus have reduced odds of entering competitive universities.

### Undergraduate Medical Schools of Japan

There are currently 79 undergraduate medical schools in Japan, including 50 national/prefectural ones and 29 private schools.<sup>5</sup> The medical education is 6 years in duration, typically comprising 2 years of general liberal arts, 2 years of pre-clinical education and 2 years of clinical education. Most medical students in Japan are immediate graduates from high schools. Although college graduates are also offered admission in 36 schools, they account for fewer than 10% of the available positions.<sup>5</sup> Recruiting researchers from the basic sciences may be one reason for admitting younger students (18 years old) to medical schools in Japan. Furthermore, a 6-year curriculum is more profitable for universities compared with a 4-year one.

The university that one attends and graduates from has a great impact on one's professional career and general social status. There is a close link between graduation background and professional career among Japanese physicians and thus it produces intense competition for admission to the medical schools at some of the most prestigious universities.

### Entering Undergraduate Medical Schools

In Japan, all high school graduates are eligible to enter into medical schools. Among all the departments in the universities, entry to undergraduate medical school is the most difficult yet the most prestigious.<sup>6</sup> Thus, Japanese students who aspire to enter into medical schools prepare

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arduously for the entrance examinations.

High school students must choose either the Mathematics/Physicochemical Science (*Rikei*) or Humanities/Social Science track (*Bunkei*) after completing their first year of high school. *Rikei* students take 3 years of high school mathematics, whereas *Bunkei* students are not required to study any additional mathematics.<sup>7</sup> Most medical students in Japan come from the Mathematics/Physicochemical Science track and not from the Humanities/Social Science track,<sup>6</sup> as the entrance examinations of medical school are traditionally based on the content of the Mathematics/Physicochemical Science track. Thus, very few students from the Humanities/Social Science track are able to enter into medical schools in Japan.

### Professionalism, Humanism and Ethics Education for Medical Students

The ultimate goal of medical education is to meet the healthcare needs of the Japanese society. Medical students need to learn the core competencies that address these needs and transcend all disciplines of medicine.<sup>8</sup> The most important components of these core competencies include professionalism, humanism and ethics. Modern medical professionalism requires physicians to exhibit altruism, accountability, service, honour, excellence, duty, integrity and respect for others.<sup>9,10</sup> Medical humanism is also mandatory for physicians to effectively and empathically care for the elderly, the terminally ill, or patients with deprived socioeconomic factors. Furthermore, based on the principles of clinical ethics, physicians should exhibit a commitment to the following traits: to trust, show benevolence, intellectual honesty, courage, compassion and truthfulness.<sup>9,11</sup>

However, issues in professionalism, humanism and ethical behaviour among medical students and young physicians have recently become a widespread serious concern to medical educators and the general public in Japan.<sup>12,13</sup> Some students with unprofessional attitudes and behaviours are indeed allowed to enter into medical schools.<sup>12,14,15</sup> Formation of character and promotion of virtue may be difficult during the medical education period, as some students are poorly motivated to learn professionalism, humanism and ethics because of a lack of social experience, as well as an exaggerated perception of elitism. Many students agree that, if they were to seek treatment for their own family members, they would not trust some of their classmates.

### Reforming the Admission Criteria to Medical Schools in Japan

Medical educators have an obligation to protect future patients from dishonest or unethical future physicians.<sup>16</sup>

Given the growing public concern regarding the professionalism of physicians, medical schools must recognise this obligation. One possible measure to meet this obligation would be to expand efforts to recruit applicants with excellent character traits or personality. Some graduates from other departments can be highly motivated to learn professionalism, humanism and ethics because of their social experiences. There may also be many students from the Humanities/Social Science track who could be good candidates as future physicians, and are highly skilled at communications with patients. While they may initially find it difficult to learn biochemistry, molecular biology and biostatistics, they can comprehend most of these subjects without advanced mathematics.

A new system for cultivating physicians might include recruitment of graduates from other departments and particularly those from the Humanities/Social Science track. Indeed, a recent survey among 3993 faculty members of medical schools throughout Japan also showed that about 60% of them were in favour of introducing graduate medical schools.<sup>6</sup> This new medical school system could be compared prospectively to the traditional medical school system, in terms of meeting the healthcare needs of the Japanese society.

Introducing graduate medical schools will provide substantial benefits in Japanese society. There will be a diversity of backgrounds among applicants to medical professions and their broad spectrum is more likely to meet the various needs of the public. Medical humanism and ethical behaviours are more likely to be enhanced in medical professions. Arts and Science are equally important for becoming a good and masterful physician.

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