

Staff Analysis
of the Standards Used by
Taiwan
for the Evaluation of Medical Schools

Prepared August 1998

Background

At its September 1996 meeting, the National Committee on Foreign Medical Education and Accreditation (NCFMEA) made a determination that Taiwan's standards for the evaluation of medical schools were not comparable to those used in the United States, based on the Committee's review of the information it had received from the country at that point. Taiwan has now submitted additional information regarding its medical schools and has requested that the NCFMEA reconsider its previous decision of noncomparability. The staff analysis that follows incorporates the new information into the analysis that was originally presented to the NCFMEA in September 1996. It should be noted, however, that the new information consists principally of an evaluation report that was prepared after a review of eight medical schools in 1996 and catalogs of the various schools. The report addressed the facilities, equipment, faculty, curriculum, and teaching methodologies at the medical schools visited. However, the tone of the report suggests that the review was not part of a systematic accreditation/ approval process but rather a one-time evaluation to determine how the medical colleges had utilized special funding given to them in 1991 to upgrade their facilities and equipment.

Medical colleges in Taiwan encompass schools of medicine, dentistry, pharmacy, public health, nursing, rehabilitation medicine, and medical technology. Department staff is uncertain as to the exact number of medical schools in Taiwan due to conflicting information provided by the country. In its 1995 submission, which served as the basis of the September 1996 staff analysis, the Ministry of Education reported there were ten medical colleges in the country, four public and six private. According to the Ministry, these schools had a total enrollment of 8,770 medical students. In the 1996 evaluation report that Taiwan submitted in 1998, only eight medical schools were listed.

Regardless of how many medical schools there are in the country, the information provided by Taiwan indicates that the schools offer two programs leading to a medical degree: a five-year program for those with a baccalaureate degree and a seven-year program for those entering with only a high school diploma. During 1995, one medical school in Taiwan invited a team of medical educators from the Schools of Medicine at Harvard University and the University of Rochester ("the American team") to evaluate recent curricular reforms it had instituted. As the team's comments provide a

perspective on medical education in Taiwan, at least as it is practiced at the one school the team visited, they are incorporated into the analysis that follows.

Summary of Findings

Based on its analysis of the available information, Department staff concludes that Taiwan does not appear to have a system in place that substantially meets the guidelines established by the NCFMEA. Although Taiwan's Ministry of Education has provided some information regarding the medical programs provided by the country's medical schools, it has not provided any information on the standards or processes it uses to evaluate those medical schools. There is some evidence - in the form of the report of the American team - that suggests students are receiving a quality education in medical schools in Taiwan. Further, there is documentation that the Ministry has conducted at least one review of the medical schools and has made recommendations for improvement at these schools. However, this evidence is insufficient for Department staff to determine that Taiwan has in place accreditation/ approval standards and processes that are comparable to those used to accredit medical schools in the United States.

Staff Analysis

The National Committee on Foreign Medical Education and Accreditation is charged with determining whether the standards of accreditation used by a foreign country to accredit medical schools offering programs leading to the M.D. (or equivalent) degree are comparable to standards of accreditation applied to M.D. programs in the United States. In making this determination, the Committee uses the following guidelines which it has determined provide an appropriate framework for the thorough evaluation of medical schools offering programs leading to the M.D. (or equivalent) degree. The Committee wishes to make it clear that these are in fact guidelines and that a foreign country's review and approval process can differ substantially from these guidelines and still be determined to be comparable to the standards used in the United States, provided the foreign country can demonstrate that its standards and processes of evaluation are effective alternatives to those used in the United States.

PART I: Accreditation/Approval Standards

1. Objectives

The accreditation/approval process used by the foreign country should determine whether the educational mission of the medical school serves the general public interest and whether its educational program is appropriate in light of the mission and objectives of the school. Approval

should not be granted if it is determined that the educational program is inconsistent with the mission and objectives of the school.

The accreditation/approval process should determine whether the program is legally authorized to provide medical education in the country in which it is located. Approval should not be granted to a program that is not legally authorized to provide such education.

Mission and Objectives:

Taiwan did not submit any information that would indicate it requires the education mission of medical schools to serve the general public interest.

Legal Authorization:

According to the information provided by the country, the Ministry of Education is legally responsible for implementing regulations covering all education. This would seem to imply that its authority covers medical schools, although documentation was not provided verifying such authority.

2. Governance

The accreditation/approval process should determine whether there is an appropriate accountability of the management of the institution to an ultimate responsible authority external to and independent of the institution's administration. Approval should not be granted if the school lacks such a system of external accountability.

On the issue of governance, a member of the American team stated that "We were very impressed by the vision and leadership of you and your staff. I believe that meaningful reform is not possible without a governance that can set the tone that is desired and has the power to encourage the process of change." While this statement would seem to indicate that the American team was satisfied with the administrative processes at the one school it reviewed, Taiwan did not provide evidence that it has standards related to the governance of medical schools.

3. Administration

The accreditation/approval process should determine whether the administration of the school is effective and appropriate in light of its mission and objectives. Approval should not be granted if it is determined that the administration is ineffective or inappropriate in light of the stated mission and objectives.

The accreditation/approval process should determine whether the chief academic official of the medical school is qualified by education and experience to provide leadership in medical education. Approval should not be granted if the chief academic official's credentials and training background are not appropriate for fulfilling his or her responsibilities involved in decisions involving admissions and curriculum.

The accreditation/approval process should determine whether the faculty are appropriately qualified to teach and are involved in decisions involving admissions and curriculum. Approval should not be granted to schools that fail to demonstrate appropriate faculty qualifications and faculty involvement in admissions and curriculum development and delivery.

Taiwan did not present any information regarding how it evaluates the administration of medical schools. As noted in the previous section, the American team seemed satisfied with the administrative processes it found at one school. However, the team also said it did not explore the school's administrative system to bring about change within the school.

Taiwan did not provide any details regarding its standards for the qualifications and experiences of a medical school's administrative staff and faculty. Neither did it provide information regarding any requirements for faculty involvement in curriculum development and delivery.

The Ministry of Education did provide a copy of standards for teaching hospitals. However, it did not elaborate on the entity responsible for establishing the standards or the process used to evaluate compliance with the standards. The standards contain some general qualifications for administrators and teaching staff. Basically, they identify three categories of teaching hospitals (medical centers, regional hospitals, and local hospitals) and note that the qualifications for administrators will vary for each category. The standards group teaching faculty under a generic category of "other medical personnel" for all three types of teaching hospitals and state that these individuals "should possess sufficient training instructor credentials."

4. Educational Program

The accreditation/approval process should examine whether the educational program of a medical school is of sufficient length to meet the mission and objectives of the school and to provide students with the knowledge and skills necessary to become a qualified physician. Approval should not be granted to a school that does not provide an educational program of at least 32 months in duration.

The accreditation/approval process should determine whether the curriculum provides an education in the sciences basic to medicine, a variety of clinical subjects, and various ethical, behavioral, and socioeconomic subjects pertinent to medicine. Approval should not be granted to a school whose educational program does not provide such a broad-based curriculum.

The accreditation/approval process should determine whether the requirements for successful completion of the program of medical education conform to commonly accepted standards, with a particular focus on clerkships (or their equivalent) and other forms of clinical training. Approval should not be granted if such training is of insufficient breadth, is not conducted in suitable medical facilities, or is not adequately supervised.

Program Length:

The two programs offered by medical schools in Taiwan are of 60 and 84 months in length, respectively.

Curriculum:

The country submitted a list of the courses for the seven-year program that would generally appear to meet the guidelines for this section. The courses include chemistry, biology, physics, biochemistry, biostatistics, parasitology, gross anatomy, histology, physiology, microbiology, immunology, pathology, and pharmacology. However, there was one area mentioned in the guidelines that was not fully covered in the curriculum presented by Taiwan. Whereas the guidelines state that the curriculum should have courses covering "various ethical, behavioral **and** socioeconomic subjects (emphasis added)," information provided by the government indicates that students are only required to take a course in one of these categories. It is possible that all the subjects cited in the guidelines are included in other courses students must take, but this could not be determined since no information was provided as to course content.

The American team generally seemed pleased with the curriculum at the one school it visited. The team believed that the teaching was excellent, and at least one member of the team stated that "[the college's] graduates, faculty, and students have distinguished themselves as world leaders of medicine."

While the American team's comments would seem to indicate that it found the curriculum at the one school it evaluated to be of excellent quality, the country did not provide any information as to either the process it follows or the standards it uses to evaluate medical schools' educational programs. On the contrary, the information provided by the country would appear to indicate that it no longer regulates the core curriculum in medical schools and each school may now determine its own curriculum. Given this fact, it is not clear to Department staff how Taiwan ensures that the

educational program provided by its medical schools conforms to commonly accepted standards.

In its 1998 submission, Taiwan did provide an evaluation report that identified the curriculum followed in the eight medical schools and assessed how the schools had utilized special funding provided to them to upgrade their equipment and facilities. As discussed in the report, two delegations were established over a period of three years to review the curriculum, faculty, teaching methodologies, facilities, and equipment at the schools, and the report summarized what the teams found and contained several recommendations for improvement. With regard to the curriculum, the report encouraged professors to link courses together in order to “seamlessly merge traditional basic concepts with advanced new technology and knowledge.” Professors were also encouraged to communicate with each other to ensure course continuity throughout the entire program. The report identified weaknesses in some schools’ curriculums and made specific recommendations for improvement at these schools.

Department staff is uncertain whether the report was a one-time effort or part of an overall process that the Ministry regularly follows in evaluating - and reevaluating - medical schools. It would appear, based on the contents of the report, that the review was a one-time affair. Regardless of whether it was a one-time effort or part of a regular review process, the Ministry did not identify any standards it used when it reviewed the medical schools.

Clerkships:

The Ministry provided a detailed explanation of clinical rotations, which take place during the last three years of training. In the first year, students are placed in groups of 16-20 students. These groups are then subdivided into groups of 8-10 students, which are rotated through the various medical specialties including surgery, pediatrics, psychiatry, ophthalmology, dermatology, otorhinolaryngology, radiology, obstetrics gynecology, neurology, and urology. According to the Ministry, all clinical rotations are conducted in accredited teaching hospitals that have 300-2000 beds. Taiwan did not elaborate on the process used to supervise students’ clinical work.

5. Medical Students

The accreditation/approval process should determine whether the medical school admits only those students who possess the intelligence, integrity, and personal characteristics that are generally perceived as necessary to become effective physicians. Approval should not be granted to a school that fails to admit qualified students.

The accreditation/approval process should determine whether the medical school carefully monitors the progress of students through the educational

program and graduates only those students who successfully complete the program. Approval should not be granted if the school fails to monitor students for satisfactory academic progress.

Admissions:

According to the information provided by Taiwan, all students seeking entrance to medical schools must take a national examination. This examination covers the following topics: Dr. Sun Yat-Sen's thoughts, Chinese, English, biology, chemistry, and physics. No specific information was provided, however, about the selection process.

The American team noted that the students at the one school it visited were highly motivated and competent. One observer noted that "I have been very impressed by the intelligence, the motivation, and the humanity of the medical students" and stated further that "I was very much impressed with the competence and adaptability of the students."

Monitoring of Students:

Regarding this issue, Taiwan reports that all medical students are given mid-term and final examinations in each course they take, including clinical rotations. A score of 60 must be achieved to pass a course. The American team verified the monitoring of medical students, stating that students are required to take examinations at the end of each course and clerkship. However, it noted that an undue emphasis appeared to be placed on written examinations rather than on clinical performance. The following observation by a team member illustrates this point:

"My concept is that student evaluation in Taiwan generally, and at [name of college withheld] particularly, tends to drive its students to excel in short-answer examinations, perhaps at the expense of these [clinical performance] other measures. A student's acceptance to medical school and/or residency programs is based largely, if not exclusively, upon such scores. A student told us that, while as much as 50% of a course's grade may be based on "clinical performance," he indicated that many times the evaluator does not know the student being evaluated and gives a default grade of Good, without amplification. Inasmuch as the narrow range of grades of these descriptors does not discriminate outstanding from poor students, the written examination has assumed a disproportionately great role in stratifying student performance. The impetus to spend time at the bedside or performing other clinical activities, is, hence, minimal. It was alleged that one student obtained a grade of Honors in Surgery without having ever scrubbed for an operation."

6. Resources for the Educational Program

The accreditation/approval process should determine whether the medical school has physical facilities that are quantitatively and qualitatively

adequate for the size and scope of the educational program, as well as the size of the student body. Approval should not be granted if the facilities are inadequate.

The accreditation/approval process should determine whether the faculty provides effective teaching and is of sufficient size to provide the scope of the educational program offered. Approval should not be granted if there is an insufficient number of qualified faculty.

The accreditation/approval process should determine whether the medical school has a library sufficient in size, breadth, and depth to support the educational program. Approval should not be granted if the library is inadequate.

Physical Facilities:

According to the Ministry of Education, there are regulations that link the student population with school resources. For example, a school with an enrollment of 1,000 students or less must be located on a piece of land of at least 50,000 square meters and must have a library with at least 100,000 books and journals. The Ministry further notes that these regulations also cover other necessary facilities. Additionally, the Ministry notes that special funding was given to all medical schools in 1991 to enhance their facilities and equipment. The evaluation report provided by the country as documentation noted that the special funding had led to improved facilities at all eight medical schools. However, the report also identified areas that still warranted improvement.

As noted in other sections of this analysis, the American team was very impressed with the one medical school it visited. Its comments on the facilities were that they were "first-rate" and "outstanding".

While the available information would appear to suggest that the medical colleges in Taiwan have adequate facilities, the country needs to provide evidence that it has an accreditation/approval system that routinely examines schools for compliance with its standards for physical facilities. It also needs to document that its standards encompass more than just square footage requirements based on the size of the student body.

Faculty:

Regarding the selection of faculty, Taiwan states that faculty are selected from attending physicians associated within accredited teaching hospitals. Further, each medical school evaluates the published works of a potential faculty member. Points are assigned to each published work, and physicians must earn a minimum number of points in order to qualify for an appointment as a faculty member. Additionally, to receive a faculty appointment, individuals must meet certain requirements regarding

teaching ability and clinical experience. However, Taiwan did not provide any details regarding those requirements.

Taiwan states that it does not have a rigid student-faculty ratio for medical schools. It did state, however, that a ratio of ten students to one faculty member or lower is desirable. A table submitted by Taiwan reflects that the current student to full-time faculty is 8.6 to 1.

The evaluation report provided by the Ministry encouraged all eight medical schools to focus on recruiting and training faculty and noted that quality of the teaching faculty had improved significantly since 1991. However, the report recommended that additional faculty be hired to alleviate heavy teaching loads in some courses.

The American team made several positive comments regarding the faculty at the one medical school it visited. All team members believed that faculty members were fully competent and committed to teaching.

Library:

According to the Ministry, its regulations require libraries to have at least 100,000 books and journals.

PART II: Accreditation/Approval Evaluation Procedures

- 1. There should be a clearly recognized body responsible for evaluating the quality of medical education in the country and that body should be legally authorized to accredit/approve medical schools offering educational programs leading to the M.D. (or equivalent) degree.**

Taiwan did not provide any substantive information that addressed this issue. The only statements made by the country that relate to the matter are that (1) there are regulations regarding the establishment of colleges and (2) the Ministry of Education and the Department of Health accredit the teaching hospitals.

- 2. The accreditation/approval process should include effective controls against conflicts of interest and inconsistent application of the accreditation/approval standards.**

Taiwan's response to this section is that the inclusion of professionals from outside the Ministry of Education in its evaluation process ensures the avoidance of conflicts of interest. However, it did not provide any other specific information regarding a conflict-of-interest policy.

- 3. The accreditation/approval process should provide for the regular reevaluation of approved medical schools in order to verify that they continue to comply with the approval standards.**

Taiwan states that it currently examines its medical schools periodically. However, a new policy is under consideration that would require a committee to review medical schools annually. No information was provided regarding either the frequency with which Taiwan currently examines medical schools or the process that is to be used in the proposed annual evaluation.

- 4. The accreditation/approval process should normally include a thorough on-site review of the school (and all its geographically separated sites, if any) during which sufficient information is collected to determine that the school is in fact operating in compliance with the accreditation/approval standards. This review should include, among other things, an analysis of the admission process, curriculum, qualifications of the faculty, and facilities available to medical students. If there is not an on-site visit, there should be some appropriate alternative that ensures a thorough review of the school for compliance with the accreditation/approval standards.**

Taiwan states that visits are made to schools by teams composed of both Ministry representatives and other professional individuals. Accreditation is then awarded or denied based upon the team report.

Taiwan also states that a medical school is required to prepare a written report, but only for an initial accreditation visit, not for subsequent visits. As previously mentioned, a new policy is under consideration that would require medical schools to undergo an annual evaluation.

Taiwan submitted a copy of an evaluation report that reviewed eight medical schools in 1996. The report addressed the facilities, equipment, faculty, curriculum, and teaching methodologies at the medical schools visited. However, as noted in previous sections, the tone of the report suggested that the review was not part of a systematic accreditation/approval process, but a one-time evaluation to determine how the medical colleges had utilized special funding given to them in 1991 to upgrade their facilities and equipment.

- 5. The accreditation/approval process should use competent and knowledgeable individuals, qualified by experience and training in the basic or clinical sciences, responsible for the on-site evaluation, policy-making, and decision-making.**

As previously noted, visits are made to schools by teams composed of both Ministry representatives and other professional individuals. According to the country, team members are "individuals at the top of their fields not only from medical professionals but also from social scientists, legal and health professionals."

6. The accreditation/approval process should ensure that all accreditation/approval decisions are based on the accreditation/approval standards.

Taiwan did not provide any information or documentation that it has either accrediting standards or a process of evaluating medical schools. As noted in previous sections, there was an evaluation conducted in 1996 regarding the state of the medical schools in Taiwan, but the study did not suggest that the schools were evaluated against a set of accreditation/approval standards. Further, the study did not suggest that an accreditation/approval decision was made based on the evaluation conducted.

Documentation

Translated excerpts from selected documents:

Plan for Evaluating Basic Medical Courses in Republic of China Medical Schools,
Comprehensive Evaluation Report

Standards for Evaluating Hospitals and Teaching Hospitals

Medical College Catalogs