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Accreditation of Undergraduate Medical Training Programs: Practices in Nine Developing Countries as Compared with the United States

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ABSTRACT Context and objectives: Undergraduate medical training program accreditation is practiced in many countries, but information from developing countries is sparse. We compared medical training program accreditation systems in nine developing countries, and compared these with accreditation practices in the United States of America (USA).

Methods: Medical program accreditation practices in nine developing countries were systematically analyzed using all available published documents. Findings were compared to USA accreditation practices.

Findings: Accreditation systems with explicitly defined criteria, standards and procedures exist in all nine countries studied: Argentina, India, Kenya, Malaysia, Mongolia, Nigeria, Pakistan, Philippines and South Africa. Introduction of accreditation processes is

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relatively recent, starting in 1957 in India to 2001 in Malaysia. Accrediting agencies were set up in these countries predominantly by their respective governments as a result of legislation and acts of Parliament, involving Ministries of Education and Health. As in the USA, accreditation: (1) serves as a quality assurance mechanism promoting professional and public confidence in the quality of medical education, (2) assists medical schools in attaining desired standards, and (3) ensures that graduates' performance complies with national norms. All nine countries follow similar accreditation procedures. Where mandatory accreditation is practiced, non-compliant institutions may be placed on probation, student enrollment suspended or accreditation withdrawn.

Conclusion: *Accreditation systems in several developing countries are similar to those in the developed world. Data suggest the trend towards instituting quality assurance mechanisms in medical education is spreading to some developing countries, although generalization to other areas of the world is difficult to ascertain.*

KEYWORDS *Accreditation, undergraduate medical training programs.*

Introduction

Accreditation is a process whereby officially appointed external regulatory bodies, accountable at government level, evaluate educational institutions using established criteria, standards and procedures. It entails gathering data on various aspects of the educational institution and making decisions regarding compliance with the standards. This is done primarily to ensure the quality of education required to produce competent graduates.

Recent data (Boelen & Boyer, 2001) indicate that up to two-thirds of the more than 1600 medical schools currently listed in the World Health Organization (WHO) World Directory of Medical Schools (World Health Organization, 2000) are externally accredited. Explicit criteria are readily available in industrialized countries, e.g. USA (Association of American Medical Colleges and American Medical Association, 2003) and Australia (Australian Medical Council, 2002) but published data comparing accreditation practices in developing countries are sparse.

A better understanding of accreditation practices in developing countries requires a mechanism for data sharing and comparison. The Foundation for Advancement of International Medical Education and Research (FAIMER), a non-profit subsidiary corporation of the Educational Commission for Foreign Medical Graduates (ECFMG), recently launched a postgraduate program for medical educators from developing countries (Norcini *et al.*, 2005). This program brings together professionals from different countries which presents an ideal opportunity for collaboration. FAIMER fellows gathered information pertaining to medical training programs and accreditation practices in nine developing countries, see Table 1 (United Nations Development Programme, 2003). This paper presents an overview and analysis of the data, highlighting similarities and differences in accreditation practices in nine developing countries and compares these to the USA.

Table 1. Demographic data, health care and economic indicator statistics and medical school training information for nine developing countries as compared to the United States of America

	USA	Argentina	Malaysia	Philippines	South Africa	Mongolia	India	Kenya	Pakistan	Nigeria
Overall and Economic indicators (Countries are listed from left to right in UN Human Development Index Rank)										
UN Human Development Index Rank* (range, 1, highest to 175, lowest)	7	34	58	85	111	117	127	134	144	152
GDP/capita (US\$)	34,320	11,320	8,750	3,840	11,290	1,740	2,840	980	1,890	850
<i>Demographic and health data⁶</i>										
Population ($\times 10^6$)	288.0	37.5	23.5	77.2	44.4	2.5	1033.4	31.1	146.3	117.8
Infant mortality (per 10^3 live births)	7	16	8	29	56	61	67	78	84	110
Life expectancy at birth (years)	77.1	74.2	73.1	70.0	47.7	63.9	63.9	44.6	61.0	51.5
<i>Medical training</i>										
Number of medical schools (per country)	126	28	13	35	8	5	233	2	35	16
Number of doctors (per 10^5 population) 1990–2002	276	294	68	124	443	254	48	14	68	19

*The US and Argentina are listed as High Human Development; Malaysia, Philippines, South Africa, Mongolia and India are listed as Medium Human Development; and Pakistan, Kenya and Nigeria are listed as Low Human Development.

Methods

From May 2003 to August 2004, published documents that described accreditation practices in Argentina, India, Kenya, Malaysia, Mongolia, Nigeria, Pakistan, Philippines, and South Africa, a convenience sample of countries representing the FAIMER Institute, 2001 and 2002 Fellows, and the USA were obtained from national accrediting bodies, government ministries, and university administration archives. Fellows and faculty submitted the required data which were collated and edited by the first three authors. Later the tabulated data were analyzed by all researchers in order to identify similarities and differences between respective accreditation practices. Extensive email dialogue was conducted over a year among the researchers to clarify points among policies and practices that arose in drafting the text and tables.

Results

Origin of National Accrediting Bodies and their Scope of Practice

In the USA, the American Medical Association (AMA) and the Association of American Medical Colleges (AAMC) began to inspect medical schools soon after the beginning of the 20th century. In 1942 they combined forces and the USA Department of Education and the Regional Councils on Post-Secondary Accreditation conferred national standing to this accrediting body, the Liaison Commission for Medical Education (LCME) (Kassenbaum *et al.*, 1997). Thus, in the USA, the government has delegated accreditation to a private organization.

Unlike the USA, in most of the nine countries studied, accrediting bodies were established as government entities involving ministries of Education and Health (Table 2). Private medical college associations played a limited role. In Argentina (Ministry of Education, 1995, 1997, 1999), Kenya (Government of Kenya, 1993), Malaysia (Ministry of Higher Education, 1998; 2001), Nigeria (Medical and Dental Council of Nigeria, 1990), Pakistan (Pakistan Medical and Dental Council, 1998) and South Africa (Department of Health, 1995), accreditation bodies were promulgated by parliamentary acts or as part of national education policies, in order to regulate higher education in public and private institutions. In all nine countries, unlike the USA, accreditation systems also accredit other health care training programs (e.g. dentistry, physical therapy, occupational therapy nursing), and even other professional programs (e.g. engineering, commerce, education). In Malaysia, for example, accreditation is performed by the Joint Technical Committee on Accreditation consisting of the Ministry of Health (MoH), the Ministry of Higher Education (MoHE), National Accreditation Board (NAB), Public Services Department (PSD) and the relevant professional body e.g. for medicine, the Malaysian Medical Council (MMC).

Table 2. Medical undergraduate training program accreditation agencies in nine developing countries

Country	Year in which Current Accrediting Body Established	Accrediting Body	Origin of Accrediting Body	Accreditation Requirement	Programs Accredited
Argentina	1999	National Commission for Evaluation and Accreditation of Universities (CONEAU) (government)	Started with the national law regulating higher education	Mandatory	Medicine and other programs
India	1957 (MCI) 1994 (NAAC)	Medical Council of India (MCI) (government) National Assessment and Accreditation Council (NAAC) (semi-government)	MCI was established under the Indian Medical Council Act NAAC started with promulgation of National Education Policy.	MCI accreditation: mandatory NAAC accreditation: voluntary except for five UGC-funded institutions	Medicine and other programs
Kenya	1993	Medical Practitioners and Dentists Board (MPDB) (government)	The MPDB was set up by an act of Parliament (the supreme legislative body)	Mandatory	Medicine and dentistry programs

(continued overleaf)

Table 2. *(Continued)*

Country	Year in which Current Accrediting Body Established	Accrediting Body	Origin of Accrediting Body	Accreditation Requirement	Programs Accredited
Malaysia	2001	Joint Technical Committee on Accreditation-Public Services Department (PSD), National Accreditation Board (NAB), Ministry of Health (MOH), Malaysian Medical Council (MMC), and Ministry of Higher Education (MoHE) (government)	Started with cabinet level discussions on reforms in higher education. NAB was established by government in 1996 and the first accreditation training exercise was performed in 1998.	Voluntary	Medicine and other programs
Mongolia	1998	The National Council for Higher Education Accreditation (NCHEA) (private)	Initially established as a government agency. Became an autonomous, non-governmental body later.	Voluntary	Medicine and other programs

(continued overleaf)

Table 2. *(Continued)*

Country	Year in which Current Accrediting Body Established	Accrediting Body	Origin of Accrediting Body	Accreditation Requirement	Programs Accredited
Nigeria	1964	Medical and Dental Council of Nigeria (MDCN) and the National Universities Commission (NUC) (government)	Started as Nigerian Medical Council; later became the MDCN. NUC established by the Ashby Commission.	Mandatory	Medicine and dentistry (MDCN); other university programs (NUC)
Pakistan	1962	Pakistan Medical and Dental Council (PMDC) (government)	Started with the passage of the Medical and Dental Council Ordinance.	Mandatory	Medicine and dentistry programs
Philippines	1957	Philippine Accrediting Association of Schools, Colleges and Universities (PAASCU) (private)	Started by 11 Catholic schools. Later expanded its membership and coverage. In 2000, all medical schools included.	Voluntary	All elementary, secondary, tertiary and graduate education programs

(continued overleaf)

Table 2. *(Continued)*

Country	Year in which Current Accrediting Body Established	Accrediting Body	Origin of Accrediting Body	Accreditation Requirement	Programs Accredited
South Africa	1998	Medical and Dental Professions Board of the Health Professions Council of South Africa (HPCSA) (government)	Medical and Dental Council of South Africa promulgated by Health Professions Act of Parliament in 1974. Replaced by HPCSA in 1998 after election of first democratic government in South Africa.	Mandatory	All health professions, except nursing

Not all accreditation systems are governmental however and accreditation in the Philippines was established as a private organization (Philippine Accrediting Association of Schools, Colleges and Universities, 2000a, 2001). Mongolia initially set up a government agency that later became a private entity (National Council for Higher Education Accreditation, 2003). In India, accreditation and educational improvement processes involve both a government and semi-governmental organization. The Medical Council of India (MCI) a government agency, grants permission for the opening of medical colleges (Medical Council of India, 2002). The National Accreditation and Assessment Council (NAAC), an autonomous body established by the University Grants Commission (UGC) of India, assesses and accredits medical schools to ensure satisfactory levels of quality culminating with a quality grade of A++ down to C or below, or assessed and found not qualified for accreditation (National Assessment and Accreditation Council of India, 2004).

Purpose and Consequences of Accreditation

In the countries reviewed, accreditation primarily ensures the quality of educational programs by maintaining compliance with defined standards. Additional objectives include ensuring a high level of institutional functioning, strengthening service capabilities of educational institutions and improving public confidence in medical schools. As in the USA, accreditation systems can provide institutions with a variety of advantages shown below:

- Affirmation of the quality of education, based on reliable information
- Prestige and honor gained by the institution
- Attractiveness of the school to prospective students and their parents
- National or international recognition of the degrees awarded by the school
- Incentives such as administrative and financial autonomy
- Availability of funding and subsidies, based on objective data for performance
- Culture of periodic evaluation and improvement; identification of areas for planning and development
- Ranking as a competitive institution; peer recognition.

In Argentina, Kenya, Nigeria, Pakistan and South Africa accreditation of medical programs is mandatory. In these countries, according to accreditation agency documents, institutions failing to meet minimum standards are prevented from enrolling students or face closure if corrective measures are not implemented (Government of Kenya, 1993; Health Professions Council of South Africa, 2003; Medical and Dental Council of Nigeria, 1990; Ministry of Education, 1999; Pakistan Medical and Dental Council, 1998). For example, in Kenya, failure to comply with the requirements of the Medical Practitioners and Dentists Board leads to withdrawal, cancellation or suspension of recognition of the institution's qualification (Government of Kenya, 1993).

In South Africa, disciplinary measures may include placement of the school under probation or withdrawal of accreditation (full or provisional) (Health Professions Council of South Africa, 1999).

Accreditation in Malaysia, Mongolia and the Philippines is voluntary. In these countries powerful incentives to undergo accreditation exist. For example, in Malaysia graduates of non-accredited schools will not be registered or given license to practice by the MMC unless they pass the unscheduled examinations organized by one of three accredited schools (Ministry of Higher Education, 2001). In the Philippines, medical institutions that do not meet the required standards cannot avail themselves of certain accreditation benefits and privileges including special administrative and financial autonomy, additional curricular flexibility, priority in funding assistance for scholarships, library materials and laboratory equipment, government subsidies for faculty development and even grant of charter or full autonomy (Philippine Accrediting Association of Schools, Colleges and Universities, 2001). In India, MCI accreditation is mandatory while NAAC accreditation is voluntary, except for five colleges funded by the UGC (Medical Council of India, 2002; National Assessment and Accreditation Council of India, 2004).

In the USA, accreditation is also nominally a voluntary peer review process. However, all USA medical schools seek accreditation because it is a requirement for entry of their graduates into approved post-graduate training programs and most states require graduation from an accredited medical school for licensure purposes. Additionally, accreditation is required for many federally-funded programs and grants. Similar to the countries with mandatory accreditation, disciplinary measures in the USA may include placement of the school on probation and, if compliance is not achieved, withdrawal of accreditation (Association of American Medical Colleges and American Medical Association, 2003).

Methods of Defining and Revising Criteria, Standards and Procedures

General criteria developed in the USA and the other countries studied are shown in Appendix I. The criteria were established through a comprehensive process involving many stakeholders. In Argentina, for example, the process involved the Ministry of Education and the Council of Universities, consisting of deans and educators selected from the national public medical schools (Ministry of Education, 1995). In India, guidelines were developed by the NAAC based on input from National Consultative Committees composed of experts from various disciplines (National Assessment and Accreditation Council of India, 2004). The current standards used in Malaysia and South Africa were derived from the World Federation for Medical Education (WFME) guidelines (World Federation for Medical Education 1998; 2000). Initially, Malaysia developed a model of accreditation that relied on peer review. Subsequently, the guidelines were reviewed and aligned with the WFME guidelines, on the basis of discussions held in a number of WHO

regional workshops involving representatives from the medical profession, the MMC, institutions offering medical programs, the MoHE, the MoH and the PSD (Ministry of Higher Education, 2001). In South Africa, soon after the first national democratic elections in 1994, undergraduate medical education regulations were promulgated by the Department of Health. Thereafter, the Health Professions Council of South Africa (HPCSA) developed a profile for the South African doctor based on British recommendations (General Medical Council, 1993) and the “Cape Town Declaration” (World Federation for Medical Education and the World Health Organization, 1995) endorsed by the WHO and WFME. The goals and objectives of medical education and training are based on this profile (Health Professions Council of South Africa, 1999).

In the Philippines the process was slightly different. The Association of Philippine Medical Colleges adopted the Philippine Accrediting Association of Schools, Colleges and Universities (PAASCU) as its official accrediting body in 2000, and together they defined the criteria and standards for the accreditation of medical schools (Philippine Accrediting Association of Schools, Colleges and Universities, 2000b).

Revising criteria, standards and procedures is a more variable process. In the USA, anyone (medical school, organization, public) may propose a new standard for consideration by the LCME, followed by public review before the standard is adopted. In the countries studied, different stakeholders participate in revision processes. For example, in South Africa, members of the public, represented on the Health Professions Council of South Africa (HPCSA), may propose revisions of existing criteria. Academic staff from accredited institutions also periodically participate in HPCSA workshops where criteria are reviewed (Health Professions Council of South Africa, 2003). In Malaysia, proposals for revisions are discussed at MoHE workshops, with representatives from various medical schools, the MMC and the PSD; these are then refined by the Deans Council that meets regularly with the MoHE.

Accreditation Procedures

Accreditation procedures as set out by the LCME in the USA, are similar to those in all nine countries studied. They include:

- *Institutional self-study.* A comprehensive analysis of the school’s goals, educational resources and effectiveness is prepared by the faculty and administration and takes about six months to complete. The results are presented to the accrediting body in a self-study report which forms the basis of a site visit undertaken by a survey team appointed by the accrediting body.
- *Formal site visit.* The survey team, made up of 5–8 members, conducts a site visit (of 3–7 days, depending on requirements), in order to verify the self-evaluation report. In the USA, survey teams, appointed by the LCME, include faculty and administrators from peer medical schools, medical

students, practicing physicians and organizations representing the profession, public and government. The team is usually chaired by a director of medical services or dean of another medical institution. The situation is generally similar in the countries studied. For example, in South Africa survey teams are composed of an HPCSA-appointed chairperson (a director of medical services at another medical institution) a secretary, an education expert and four senior clinicians representing the clinical disciplines. Team members are selected from peer institutions on the basis of their active involvement in medical education and clinical practice (Health Professions Council of South Africa, 2003).

- *Accreditation decision.* Upon receipt of a favorable recommendation from the survey team, the matter is discussed and decisions are made by the highest level of governance within the accrediting agency.
- *Accreditation status.* In Argentina, Malaysia, Nigeria, Pakistan and South Africa, institutions are granted full accreditation, provisional accreditation, no accreditation or withdrawal of accreditation. In India, the accredited institutions are graded on a nine-point scale and the results are displayed on the NAAC website (National Assessment and Accreditation Council of India, 2004). In the Philippines, institutions are accredited at different levels (Levels I-IV) for purposes of increasing autonomy and additional benefits (Philippine Accrediting Association of Schools, Colleges and Universities, 2000a).
- *Accreditation duration.* After being granted full accreditation, institutions undergo another cycle of accreditation after a stipulated interval of time. In most of the countries studied, full accreditation is awarded for five years. In the USA, the LCME accreditation period is currently being extended from seven to eight years.
- *Differences in accreditation for new and established schools.* While the processes are generally similar, there are some distinctions. In the Philippines, the PAASCU initially grants accreditation and membership to the PAASCU for a period of three years. Upon favorable re-evaluation, institutions receive full accreditation for five years. If an institution fails to meet the minimum requirements, accreditation is deferred, during which time the institution has to effect the necessary changes (Philippine Accrediting Association of Schools, Colleges and Universities, 2000a). In Malaysia, schools interested in starting medical programs apply to the MoHE which appoints a panel to evaluate the proposed course. Upon approval there are periodic visits to monitor progress and accreditation is conducted about six months before the first students graduate. If schools start a program without this approval, the program is closed and students are distributed to other schools (Ministry of Higher Education, 2001). In the USA, new schools obtain a charter from their State Department of Higher Education and develop their program under the aegis of the LCME. If all goes well, the LCME awards accreditation to the school at the time of

graduation of the first class and sets periods of review thereafter. In addition to LCME accreditation, USA medical schools, as part of their universities, are accredited regularly by the regional Post Secondary Education Councils, which primarily evaluate education at various degree awarding levels in all the schools of the university (Association of American Medical Colleges and American Medical Association, 2003).

- *Feedback to the institution.* In general, the medical schools of the nine countries receive feedback and recommendations on how to improve and meet standards of accreditation based on the survey team report.

Discussion

The data suggest that the trend towards instituting quality assurance mechanisms in medical education is spreading to developing countries. Using processes similar to those established in countries such as the USA, both public and private medical education institutions in the developing world are adopting practices to meet accreditation needs. This includes several countries that are rated low on the United Nations Human Development Index, namely Kenya, Pakistan, and Nigeria (United Nations Development Programme, 2003). There are limitations to this study. First, while it is evident that quality assurance mechanisms are being used in these nine developing countries, it is not possible to generalize to all parts of the world. Second, documented “actual normative” accreditation policy may not necessarily reflect “actual practice”. Further studies can be considered to better understand the details of implementation (Mollis & Marginson, 2002).

There are numerous similarities among the accreditation systems in the ten countries studied. Five common features are evident:

- (1) accrediting agencies were mostly established by national governments;
- (2) accrediting bodies engaged in a broad, inclusive process of dialogue and consultation when developing the criteria, standards and procedures of accreditation;
- (3) accreditation systems generally rely on a three-pronged approach:
 - (a) external agencies are responsible for determining and establishing standards and criteria,
 - (b) institutions are evaluated to determine if educational standards have been met, and
 - (c) institutions that meet standards are periodically reviewed to ensure ongoing compliance;
- (4) self-study reports and the survey team reports inform the respective accrediting body's decisions and recommendations to the medical school;
- (5) accreditation is viewed as a quality assurance mechanism that serves to promote public confidence and provide assurance to society and to the

profession, ensuring that the quality of programs to educate health care professionals is protected and enhanced. This is particularly important in countries where there is a proliferation of new medical schools. For example, in Malaysia there were only three medical schools until 1992. Since then, five private and five public schools have opened. In Pakistan, the Pakistan Medical and Dental Council has laid down stringent requirements to control the growth of medical colleges in the private sector.

Clearly there is some variation in the nature and evolution of the accreditation systems. This is true even in the USA, where standards have been revised or additions made over the last several decades. Flexibility and ongoing education about the process, as well as sufficient financial support, have to be ensured so that accreditation systems can be responsive to the rapidly changing demands of health care education and socio-cultural changes evident in the various countries involved in this study. For instance, in Malaysia the MoHE is currently conducting workshops to educate institutions regarding self-evaluation processes. Other countries are doing this by distributing pamphlets on accreditation requirements at symposia, discussions, and educational conferences, as well as making them accessible through websites. Financing of accreditation systems is a complex issue that is worthy of additional investigation to determine whether funding by a government agency or by medical schools, or combined contributions affects the long term outcome.

The duration of accreditation in the countries studied is insufficient to permit evaluation of long-term impact. In general the process elements of education, rather than performance outcomes are the current focus. In the long-term, accreditation practices focusing on both process and outcome, should lead to continual improvement of medical schools and their graduates throughout the world. Research to substantiate this outcome is needed.

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Appendix I

Criteria for evaluation

- Mission and goals of the institution
- Educational program: educational objectives or desired learning outcomes, course content, learning activities, teaching and assessment methods, learning resources and students' participation in research projects
- Students: admissions/entry requirements, students' progress including monitoring of students performance, institutional support and guidance, and research activities for students
- Academic/teaching staff: number (staff:student ratios), training, responsibilities, development programs, promotion policy, research productivity)
- Educational resources: library, information technology and laboratory facilities, number and location of hospitals and health centers for clinical teaching, student:patient ratio and clinical case mix
- Economic support and financial stability
- Process for monitoring, evaluating and improving the curriculum
- Administration, educational management and governance
- Forward planning strategies and activities.