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National Standards for Medical Education
*A focus on quality enhancement**

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Introduction :

India has a rich heritage of medical and health sciences as is reflected in the antiquity of health care and medical education, practiced since the pre-historic times. Since the time India attained independence, there has been a rapid expansion in the education and training of practitioners of all systems of medicine. However, it is being increasingly realized that there has been a dichotomous growth of health services and manpower, each developing in isolation and without proper linkages in termporal and spatial dimensions (1).

With the dawn of new millennium, one cannot but agree with the observation that advances in biomedicine during last century have produced greater impact on human health than all the cumulative knowledge since the dawn of history. These exciting developments while unraveling the enormous potential of scientific creativity, also raise issues which are more fundamental. How well have these basic advances in bio-medical knowledge been translated into their practical applications to problems of human health and national welfare. How far have the physicians succeeded in fulfilling the expectations of the society, and in particular of the patients?(2)

Situation Analysis :

A set of following profound statements may act as a strong motivating force :

(i) 'Health is fundamental to national progress in any sphere. In terms of resources for economic development, nothing can be considered to be of higher importance than the health of the people which is a measure of their energy and capacity as well as of the potential of man-hours for productive work in relation to the total number of persons maintained by the nation. For the efficiency of industry and of agriculture, the health of the worker is an essential consideration'.

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(ii) 'The output of the industrial worker in India is low compared with that of the worker in other countries. The productive capacity of the agricultural worker is comparatively low. The loss caused by morbidity in working time is enormous. To this must be added the expenditure to the individual and to the State in the provision of medial care.'

The statements have a most contemporary resonance and reflect the contour and content of newly emerging branch of 'Development(al) Economics', widely recognized and amplified since the award of Nobel Prize to Dr. Amartya Sen. However, these statements were recorded several years prior to the time of university graduation of most of modern messiahs of economics, and are from the First National Five Year Plan signed by the then Prime Minister of India, Sh. Jawahar Lal Nehru, on December 7, 1952 (3).

A major link in the nexus between ill-health, low productivity and low economic development is the inequitable, inefficient and poor quality of health services(4). The existing vast health infrastructure for health care delivery suffers from suboptimal performance. We must recognize that the quality of health services, their efficacy, efficiency, accessibility, sustainability and accountability depend ultimately on the performance of those who deliver the services. Improving the performance of health system in the final analysis depends on improving the knowledge, skills, motivation, work culture, and availability of the health workforce.

Health Workforce includes all human resources for health. The ILO estimates that approximately 38 million persons are currently employed in the health sector worldwide. Although health expenditure claims an increasingly important share of GDP, wage costs account for between 65% and 80% of the renewable health system expenditure.

Hence the need to optimize the performance of HRH. There are several categories of HRH : their role must be viewed in the context of health-directed tasks and activities. Broadly such tasks include :

A. Delivery of health care to individuals and families :

a. Physicians, Nurses, Pharmacists, Dentists, Physiotherapists and other health professionals and paraprofessionals.

b. Traditional healers, traditional birth attendants.

B. Delivery of Public Health Services :

Preventive and promotive health, environmental health, occupational health, industrial health.

One of the important reasons for the sub-optimal performance of health systems is a major disequilibrium between the quantity and quality of those assigned the task of delivery of services under these two broad categories, with delivery of public health services at a great disadvantage(5). Equally, if not more significant, is the poor quality and inappropriateness of the education and training of health paraprofessionals and allied health personnel. *Thus the need and rationale to enhance the quality of professional education.* What is the scope of such an endeavour?

"We cannot speak of 'quality'; we must speak of qualities. Not only are there different types of qualities, but also there are different aspects of quality : *quality of input, quality of process, and quality of output".*

While *quality of input* includes selection of students, selection of faculty, institutional infrastructure, financial resources and governance, *quality of output* reflects the competence, skills, attitude, motivation, and behavioural attributes of those who qualify as a result of reliable and valid methods of assesment. All these yardsticks provide valid measurements of some aspects of the quality of professional education. However, it is the *quality of process* which needs much sharper focus. Such measurements can only be validated against defined standards. *Hence the need of developing national standards.*

Planning for medical education in the twenty-first century must not only be in the context of contemporary needs and available technology, but must also take cognizance of a rapidly transforming society and of the newly emerging technologies, which are setting the direction of possible paradigm shifts in the near future. While articulating the thoughts and addressing the issues, besides critically examine data, whatever available, one needs to be guided by the wisdom of Bertrand Russell who struck a note of caution by stating, *"for it is not enough to recognize that all our knowledge is, in a greater or lesser degree, uncertain and vague; it is necessary, at the same time to learn to act upon the best hypothesis without dogmatically believing it"* (6). Some of the concepts and contents of medical education have already become a dogma; others are in the process of doing so. The final judgement regarding the soundness of educational policy planning for the twenty-first century shall be measured by one major yardstick: have we succeeded in imparting *relevance* and *excellence* to teaching and learning in medicine?(7)

Relevance of Medical Education

There is an on-going shift in modern health care: a shift towards an interest in the population as a complement to the physicians's traditional concern with the individual. The major health care problems of today cannot be understood without knowing how they occur in large segments of the population. The appropriate goal for the health professional is the enhancement of health, over and above that of preventing the disease or curing the ill.

While everyone would generally agree that the essential prerequisites of quality must be relevance and excellence, what is exactly intended by the use of these terms? The role of human resources of health, both individually and jointly, must be redefined to make them relevant to prevailing and prospective health needs, to acquire problem solving skills that are socially and culturally acceptable, affordable and effective, and to bring out changes in professional attitudes towards greater social responsibility and public accountability. Notwithstanding such an overarching view of relevance, it must also be recognized that at the highest level relevance may aim at collaboration between medical schools and different sectors of society so as to ensure that medical education and research programmes

effectively contribute to sustainable social, and national development.

What is implied by the term excellence? The Higher Education Quality Control Council, UK tends to describe excellence as 'The arrangement by which an institution discharges its corporate responsibility for the quality of the teaching and learning it offers by satisfying itself that its structures and mechanisms for monitoring its quality control procedures are effective and, where appropriate, they promote the enhancement of quality' (8).

The author firmly believes that *quality in medical education is a multidimensional concept,* which should embrace all its facets and functions: teaching and academic programmes, research and scholarship, faculty development, student counseling, academic infrastructure including library, laboratories and equipment, services to the community and above all, the academic environment.

Based on the consensus arrived at the Consultation arranged by the Education Commission for Foreign Medical Graduates (ECFMG) and the WHO in Geneva in 1994, Nancy Gary, past President of ECFMG, USA proposed a Matrix for establishing the quality of professional education (9). It has been suitably modified and adapted by the author to include :

Admission and support of qualified students.

Recruitment and retention of appropriate Faculty.

Institutional mission, aims and objectives.

The curriculum.

Evidence-based professional education.

A programme of quality assurance.

Accountability through academic and social audit.

The components of the Matrix need brief annotation. Selection of students must be based on the stated admission policy, including a clear statement on the process of selection. The policy should be reviewed periodically based on relevant societal and professional data, to comply with the social responsibilities of the institution and the health needs of community and society. As this issue has presently become a matter of state policy, national policy, and also of judicial pronouncements which have become areas of public debate, one must not rush in where wise men fear to tread. However, taking cognizance of contemporary needs, a reference must be made to a paradigm shift in the context of patient care which may have a bearing on student selection. The most significant aspect has been the recognition by the medical profession that today's patients are not prepared to be merely passive recipients of medical care. Today people want to be involved in decision-making process that affects their health; they want to know not only what is wrong with them but also what the choices of treatment are, and what risks are involved. To respond with sensitivity to this new patient care paradigm, we shall require a judicious mix of analytical reasoning and problem-solving skills. To these must be added a blend of empathy, communication skills, and a ready willingness to facilitate participatory management. Some of these behavioural attributes can only be ascertained by an aptitude test or a personal interview. Suffice

it to say that this requires consideration and needs to be discussed thoroughly in the context of prevailing circumstances.

Precise statements of *Institutional mission, goals and objectives* must be considered mandatory. Every medical institution must develop a Mission Statement. The institutional mission must take cognizance of present and future health needs of society, and must ensure a clear congruence between the institutional mission and the learning objectives pursued by each department and each member of the Faculty. In essence, *the Mission Statement of Faculty of Medicine in any institution is the conceptual, operational and moral compass.* It is an essential prerequisite for academic navigation and, as is often necessary, for midcourse remedial actions. As important as the statement of mission, are the statements of goals and objectives. What do we want our students to learn, and how can we express our goals succinctly and in a comprehensible manner? How do we ensure that the broad objectives are precisely understood by those assigned the task of facilitating student learning? This is the rationale of goals and objectives.

Before discussing curriculum in detail, there is a need to comprehend philosophy of learning. Sir William Broadbent has most succinctly described the knowledge dimension : *'there are two kinds of knowledge, one consisting in the accumulation and certification of facts and their natural relation; the other of a more profound character, comprehending the underlying significance of phenomena'*. The emphasis on the latter ensures life-long learning irrespective of the design of curriculum; learning must lead to comprehension of underlying significance of phenomena. It is only through such a philosophy of learning that we aim at true education as defined by George Bernard Shaw : *'Education is what you remember after you have forgotten what you have been taught'*. Finally, whatever be the method of curriculum planning and course design, it must be clearly understood that a curriculum is not a Time Table. It is a vital force in the teaching and learning of medicine and its various constituents need to be understood (10). These include :

- Curriculum definition
- Curriculum purpose and content
  Goals, objectives, context
- Curriculum development
  Principles and Percepts, Style, Structure
- Curriculum organization
  Basic educational concepts
- Curriculum design
  Systematic approach

Furthermore, it has to be continuously reviewed regarding its effectiveness and efficiency through a system of feed-back and evaluation. *'Curriculum is like water; leave it alone and it will seek the lowest level.'*

Academic staff selection, its retention, and continuing development subsequently, is a weak link in the quality matrix in almost every institution in the country (11). Every medical college must have an academic staff recruitment policy. Alternately, every state may have such a policy based on a collective thinking of all institutional heads in the state. Policy must have transparent staff selection criteria including scientific, educational, clinical, and managerial merit (the proportion of each may vary with the

job description/task analysis), as well as a track record of demonstrable attainments that foster a close relationship with the mission, goals and objectives of the institution. While the merit can be graded by assessing formal qualifications, professional experience, teaching experience, student recognition, research output, and peer recognition, the issues of local significance may include gender and SC or ST status. In essence, the policy must ensure recognition of meritorious academic activities including appropriate emphasis on research attainments, teaching qualifications obtained through attendance at workshops aimed at enhancing learning, track record as a teacher and demonstrable competence to plan and implement an educational programme.

It seems that education of educators is the most deficient component in the matrix of quality medical education. It is often said that medical education and politics were the only professions that did not require formal training. Therefore, what is equally, if not more important, is the Academic staff development. A lifelong education requires academic staff to continue updating their knowledge and improving their teaching skills and learning methods. Medical schools must establish appropriate academic staff development structures, mechanisms and programmes. National Academy of Medical Sciences, with a rich pool of unmatched talent, may initiate action to constitute a Task Force assigned the responsibility to develop a national model which may be replicated elsewhere.

Medical pedagogy is being challenged by a wide range of opportunities relating to technologies that are improving the ways in which knowledge can be generated, managed, disseminated and accessed. New information technology does not reduce the need for teachers capable of innovation, but changes their role in relation to the learning process.

A computer can assist learning but cannot impart the basic tenets of medical professionalism. Being a professional is more than being a technician. It is rooted in our moral nature : it is a matter not only of the mind and hand but also of the heart; not only of intellect and skill but also of character. Plato, in the *Meno* poses the question : *Can virtue be taught?*(12) He suggests that all depends on the meaning of 'virtue', and of 'teaching'. In this context, the 'virtue' of medicine is the ethics and ethos of health profession. Students will develop the knowledge and skills necessary to make ethically responsible patient care decision, only when they are in a position to recognize and emulate the teachers as role models(13).

Robotics may enhance motor skills but cannot be surrogate mentors. As Henry Adams aptly put it : *a teacher affects eternity; he can never tell where his influence stops.* A true mentor imparts a traditional perspective, as well as a futuristic potential, to the career choice and professional development. It is nurtured and fostered by intuitive foresight and exceptional devotion to new knowledge. Mentor is, and continues to remain, the trusted friend, the constant and always encouraging advisor, and eternal guide with selfless dedication.

Although a slight deviation from the present narrative, it may be of import to put

mentoring in its historical perspective. Mentor is the name of a Greek legend who is a principal character in Homer's Odyssey which describes the Trojan War and the life and times of Greek King Odysseus, also known as Olysses by Romans. When Odysseus was away from Greece for nearly 20 years, Mentor assumed the role of father, friend, and philosopher to Odysseus' son, Telemachus. Mentor was an exceptionally unselfish man, rich in patience, erudition, scholarship, and wisdom. Mentor gave most of his life to the education and counseling of Telemachus so that he could be a worthy son of Greece. The story of Mentor and Telemachus illustrates that a great and sustained personal investment lies at the heart of mentoring.

Continuing Professional Development (CPD) designates the period of education and training of medical professionals commencing after completion of basic medical education and postgraduate training, thereafter extending throughout their professional working life. The challenge that faces medical educators is to create a mechanism that encourages personal responsibility for maintaining competencies, yet can assure society that this responsibility is being, and has been, fulfilled. Effective CPD is characterized by a clearly felt but unmet need, and requires that structures are in place for reinforcing the learning accomplished.

Inherent in continuing professional development is a learning process which takes cognizance of evidence-based medicine. Nevertheless, it must be recognized and remembered that evidence-based medicine may usher a new era in clinical medicine, but it may best supplement and not supplant logic and reasoning as the basis of sound clinical judgment(13). What is the essence of clinical judgment? The experiential reasoning may not be statistically valid nor may it be purely deductive, yet it can be equally rigorous. In the ultimate analysis, clinical judgment is a blend and balance of experiential, personal and value-based aspects of medical decision-making with the full knowledge, but without the rigid application, of empirical evidence(14).

In the context of present narrative, what would be most appropriately included amongst the proposed methods and measurable indicators of quality in medical education. Quality assurance and appraisal may be *internal* based on self-evaluation which is an indication of the maturity and confidence of an institution. The parameters may include evaluation of incoming *students*, their scholastic qualities, academic qualifications, motivation and attitudes, as well as the assessment of the *faculty* and their qualities. The *academic ambience*, the *curriculum*, the *support infrastructure*, the *financial resources* and the *faculty compensation* constitute additional critical areas of academic audit as a part of continuing appraisal. Quality appraisal may also be *external* wherein universities of health sciences or other national agencies may evolve a regional system of accreditation of all medical schools in a defined geographic area. Such an appraisal may include peer view and site visits, providing a valid external assessment of quality, and assisting medical schools in the *attainment* and *maintenance* of *standards* of

structure, *function*, and *performance*. Finally, there must be a social audit which implies *ability to respond with sensitivity to the legitimate expectations of society*. The requisite attributes of those graduating from an institution may include the following(15) :

- Physicians must be *altruistic*, *compassionate* and *empathic* in caring for patients and must be *trustworthy* and *truthful* in all professional dealings.
- Physicians must be able to feel obliged to *collaborate* with other health care professionals to employ systematic approaches for *promoting*, *maintaining* and *improving* the health of *individuals* and *populations*.

Collaboration and functional cohesion between health care professionals is *sine qua non* for the success of health care delivery team. The essential prerequisite for *Act together* is *Learn together*. Multiprofessional (or interprofessional) education aims at imparting a task-centred, problem-based learning through interprofessional collaboration, based on commonality of learning modules and instructional strategies. It has been extensively reviewed earlier(16,17).

In summary, imparting and enhancing quality of professional education and training shall directly improve the quality of health services, thus transforming the present vicious cycle into a futuristic virtuous cycle. Eventually, the success of curriculum planning and implementation of educational programme directly depends upon those who administer and govern the system. Health is too serious a concern to be left in the hands of bureaucrats, nor can it be safely entrusted to those health professionals who do not exhibit the requisite sensitivity and lack the desired accountability to the people. Only a healthy symbiosis can lead to a paradigm shift(18).

The task is onerous and challenges are enormous. As Bertrand Russel said : *there is strength and weakness in those who stand for status quo : the strength that comes of tradition and the weakness that comes of lack of fresh thought*[6]. There is an urgent and imperative need of fresh thought to transform the mindset of those who have stood for *status quo*, for much too long for national good.

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