Reforms In Medical Education - An Action Plan

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"Reforms in medical education - An Action Plan" is an initiative to organise in a systematic and coordinated manner a series of activities leading to the adaptation of medical education to meet current and future requirements of society. As we approach the 21st century there is recognition that changes in the nature of medical practice require changes in the format and content of Medical Education.

1. Perspective of change in the health system

Serious improvements are still required in a majority of health care systems to ensure equal access to all who seek health care, as well as optimal protection against avoidable causes of unnecessary sufferings and death through disease. The search for the best possible care of the sick and suffering is needed and demanded now more than ever.

The increasing dissatisfaction of consumers with the delivery of health care is due to a combination of factors, including the higher expectations of those who are now better informed about their health. These expectations are universally expressed through a democratic process that leaves no professional group secure from public opinion and criticism.

2. Present image and future role of the medical profession

Dramatic changes will be required in medical practice; these will call for important interventions, including equally dramatic changes in medical education.

The physicians of tomorrow should be able to respond better to the needs of communities. They will, therefore, need to possess the competences necessary to promote healthy lifestyles and to communicate with consumers and community leaders in order to obtain their involvement.

Changes in undergraduate medical education will not affect the delivery of health care for a further 10 to 15 years. Therefore, national authorities, training institutions, and professional associations are urgently called upon to initiate and support movement that will educate the next generation and re-educate those who are now in practice to respond to the changing needs and demands of their society.

Presidential Address

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It is higher education that bears the responsibility for preparing health professionals for the prospective needs and demands of society. It should also be born in mind that education is a reflection of the values of society.

The medical profession should not only anticipate the nature of the education that is required, it should also contribute to finding appropriate ways to make the best possible use of health professionals. Medical schools and other university institutions can and should use their potential and resources to this end.

3. Challenges for higher education.

In the absence of such initiatives, forces outside the academic and professional world may well take the lead and impose changes that may not fully involve medical education and the medical profession. It may be argued that health is too important to leave entirely in the hands of health professionals. However, the quality of care, seen from a scientific perspective, as well as from the point of view of ethics and social justice, may be seriously compromised if those responsible for higher education in medicine and the health sciences do not become more actively involved in shaping the future of health professionals.

Because there are conflicting forces in any institutional change, we should open a wide dialogue and search for a consensus among all parties concerned in the changes that are required in booth the health care system and in medical education, and by involving them in developing appropriate strategies to achieve such changes.

The search for and the provision of appropriate medical education in a given health system may, indeed, facilitate or precipitate a cascade of changes in the education of all health professionals and in health care delivery patterns.

4. The change process

The prime emphasis of the Reform is on changing undergraduate medical education.

It should be noted that the organizations such as Wolrd Health Organization, World Federation of Medical Education have been involved at improving the relevance of medical education and the way students learn medical education. Many workshops have been organized, a large number of assignments have been carried out by consultants, and numerous fellowships have been awarded. All these efforts have been made to support Member States in their endeavours to reorientate medical education more specifically towards social relevance.

The proposal is based on the principle of using a comprehensive and systematic approach in the management of change and consists of:

A. Setting standards and developing tools for assessment.
B. Strategies for changes.
C. Follow-up through monitoring world-wide.

5. Tools for Assessment.

Setting standards in medical education is a prerequisite to the other two components designing and implementing the strategies for change and following through monitoring. An understanding of the meaning of "quality medical education" must be reached, in order to design and apply meaningful strategies for its achievement and how it should be monitored.

The assumption is that, if countries and institutions were able to determine objectively the extent to which proposed changes apply to them, they would be more readily inclined to reorientate their medical education.

The quality of graduates, the product of its medical education reflects how well a medical school fulfils its mandate.

A new mandate for medical schools

Although the mandate of a medical school may vary from place to place and from time to time, four areas of concern are of major importance:

A. active participation in the improvement of the quality and coverage of health care services;

B. guarantee of the relevance of education and research to priority health needs;

C. a constant endeavour to apply and disseminate efficient learning process in health sciences;

D. firm involvement in quality assurance and assessment of technology.

The fundamental values provide a new mandate for a medical school that would be more responsive to society and would accept a dual responsibility: an intra-institutional responsibility that stresses educational development (B and C) and extra-institutional responsibility that stresses the improvement of the health care system and delivery of service (A and C).

The values should influence the setting of standards in medical education and they should serve as the goals of the strategies
for change.

6. The search for references and objectivity.

When the standards for the quality of medical education have been decided, it will be helpful to determine the criteria and indicators which will permit a quantifiable evaluation of the extent to which ongoing education meets these new requirements.

The list of indicators should be established as the result of wide consultation, to ensure that it will be meaningful and acceptable to policy-makers and programme managers. It will be at the discretion of each medical school, to decide which indicators to retain that best reflect their particular mandate. While the fundamental values of medical education should remain inviolated, the adaptation of guidelines for data collection and quantitative assessment and thus the quest for quality in medical education should continue.

7. Strategies for Action.

Why change medical education and what should be changed are two questions that have begun to be addressed reasonably well. The change is now to explore more systematically how change can be brought about.

Formulating strategies for fundamental change in medical education is a complex undertaking. One reason for this is the requirement to involve multiple parties in achieving change in an area where self-interest is intense and deeply rooted. Another reason is the wide range of support required by medical schools as they try to move into new ground.

Because of the complexity of the change process in medical education and because of the variety of determinants that may influence it, depending on the peculiarities of the political and sociocultural context, there is no unique prescription for change in every situation. While the itineraries leading to the goal of the proposed new mandate may vary from place to place, the goal should essentially be the same.

Several strategic approaches should be considered as optionai entry points towards change. They are not mutually exclusive. In fact, for a medical school that is willing to embark on reform the selection of one particular strategic approach is simply an indication of the point at which it wishes to start the long process of change that will eventually incoorportate most of the other strategic approaches. The choice may depend on local opportunities and resources that will help to maximize initial success.

Possible Strategies for change:

1. Optimizing human resources for health.
2. Search for national consensus.
3. Initiative by the university.
4. Population perspective.
5. Addressing an important problem of public health.
6. Problem-solving education/Problem based learning.
7. Using information/communication technology.
8. Continuing medical education.

Let us now review the main features of each strategy.

7.A. Optimizing human resources for health.

Where the health infrastructure is weak, reorientation and strengthening of basic, post-basic, or continuing medical education, may be most successful within the wider framework of making optimum use of health professionals as an essential condition for successful health development. - our situation.

A pragmatic three-step approach is here proposed for the application of this strategy.

1. Make a rapid diagnosis of the health manpower situation in the whole or a part of the country.

2. Take actions that will have an early impact on the training and use of the health professionals.

3. Plan projects for more fundamental and long-lasting change, particularly in the reorientation of educational and health service institutions.

In practical terms, the strategy consists of drawing up a comprehensive plan for optimal employment of health professionals and indicating the specific role and place of medical education. It will be important to recognize that the fate of medical education is closely linked to the fate of the development plan for those who are involved in the health services.

This approach is offered as an "eye-opener" to decision-makers who are concerned with allying pragmatism with a systems approach in the recruitment, training, maintenance and use of health professionals. It may also demonstrate how a medical school can take on new responsibilities for the effective use of health professionals and, as a result, how it can reorientate its education appropriate. The strategy is broad

and may seem to be complex and difficult to follow, quite distant from the original target, i.e. changing education. However, by using this alternative route intelligently, the foundation can be laid that will support relevant and sustainable change in medical education.

7.B. Search for national consensus:

Here the issue of changing medical education and medical practice should be brought into the open and debated publicity. Representative from the political world, the health professions, health services administration, universities, and consumer groups should be invited express their opinion about the medical profession and what they expect from it.

The probability of a successful outcome largely depends on whether the parties concerned can reach a compromise in defining a set of standards in medical education and medical practice, as well as the means for identifying any significant deviation of the local situation from their perception of the "ideal".

Such a plan with agreed objectives, activities, methods and a time frame, should be supported by the establishment of a core group that would be responsible for monitoring implementation.

7.C. Action at the University Level.

The major part of the effort to promote re-orientation in medical education toward the health needs of society is ultimately to be expressed at the level by effecting modifications to the educational programmes relating to the undergraduate and continuing medical education and also as these relate to service and research responsibilities. Without resolve to change at the institutional level little will transpire whatever the external pressures. Given interest in change within the institution, only then any outside support can be highly effective.

Issues that might be identified by the institutions themselves in paving the way for reforms:

1. Asses the current medical educational programmes in terms of their relevance to the health needs of the society.

2. Consider the relevance of the medical educational programmes to the health and health man power policy of the country.

3. Review with medical teachers and students their willingness to undertake such assessments and to do so collaboratively with those responsible for national health services.

4. Assess the role the medical school can play in planning the future of the national health services and in the implementation of those plans.

5. Assess the possibilities of shifting the settings for learning so that community-based and hospital based settings are used in a balanced way.

6. Consider the curriculum and teaching methods in terms of the extent to which they involve problem solving rather than didactic methods.

7. Consider incorporating the training of teachers in teaching and assessment as an integral part of development of teaching staff.

8. Assess the role the doctors of the future might play in planning and managing comprehensive primary health care programmes and whether their current competences correspond to their future roles, including the leadership role.

9. Consider ways in which medical students could work together with students of other health professions in order to strengthen the potential for team work.

10. 10.Consider the steps necessary to bring about an awareness of the above issues among teaching staff and students.

11. Give thought to advocating the need for change to the public and to leaders in policy making.

Consideration of these issues constitutes the first steps of international reform. Having identified which of these steps they would undertake, institutions would then move toward development of plans of action, including defined targets and time frames.

7.D. Popular perspective.

One of the important aims of education is to serve people.

Medical education should be appraised for its capacity to improve the health status of a given population and/or of target groups exposed to specific health risks.

This strategy capitalizes on the potential capabilities of training institutions to plan, implement and evaluate community health programmes.

The population perspective and the multidisciplinarity necessarily entailed in this approach imply that teachers and researchers may need to acquire new skills for setting up community health programs, particularly in community diagnosis, epidemiological analysis, and health management.

More important, the training institutions would be expected to use its resources and potential for the benefit of the community. By doing so it would accept a shift of emphasis in teaching, research and service, from disease to health, from the hospital to community-based settings, from cure to prevention and promotion, and from solo practice to team work.

While staff in departments of basic, clinical, and behavioural sciences would all be associated in this move, the incentives to cooperate would have to be carefully worked out. Moreover, training institutions would have to learn to work in full partnership with the health services, local authorities and professional groups in planning and carrying out programmes of community health intervention. This strategy should lead to a critical appraisal of the role of physicians and other health professionals in preserving health and, subsequently, to a call for change on the part of medical educators and medical students.

7.E. Addressing problem of public health.

A medical school may take the initiative or it may be given the opportunity to take a leading role in the study and control of a health problem either because it poses a real threat or because of public concern. Such a problem could be, for instance, AIDS, malaria, gastroenteritis, alcoholism, drug abuse, etc.

The practical involvement of a medical school in the struggle to resolve a major problem may trigger a reflex of self-criticism implicating the institution's capacity to cope with the situation, either as an institution per se and/or through its graduates.

This strategy consists of transforming that awareness into a movement to reform targeted educational, and research/development programmes so that they can properly address a specific public health problem and, subsequently, other programmes, in the light of the community's health priorities.

Teachers and researchers in medical schools may not always be the most appropriate people to administer public health programmes. However, they could perhaps learn to do this by sharing leadership responsibilities with more knowledgeable individuals and groups and thus be exposed to fundamental issues in health care: the search for relevance, fair coverage, priority-setting, appropriate use of technologies and research findings, etc. They would also have the opportunity to tailor their training and intervention activities appropriately.

Training institutions (and their units/departments) that were willing to adapt their training, research and service activities to serve the interests of people facing a critical health situation, could be offered incentives and rewards by policy-makers as well as by the communities.

In this strategy a medical school uses the opportunity to become involved in the control of important public health problems to reflect on its mandate and on the reorientation of its educational programmes.

7.F. Problem-solving education/Problem-based learning.

The content of the curriculum, the process of learning and the learning environment should be adapted to enable learners to acquire competence in identifying the priority health problems that they will encounter in their future practice. They should also be assisted to acquire competence in using essential information in the decision-making process for the analysis and solution of these problems. The objective is to prepare doctors to think critically, to make informed decisions, and to assume responsibility for sound health management practices.

This is, in essence, problem-based learning (PBL)

However, the strategy should not restrict itself to the introduction of any particular clinical or public health problem as a basis for curriculum development; this by itself may not necessarily guarantee relevance in medical education. What is of critical importance is to ensure that there is an interactive relationship between the priority health needs and problems in the community, the expected role of the medical practitioner, the educational content and process, and the involvement of the training institution in actually solving these problems.

This is what is meant by problem-solving education (PSE)

This strategy advocates a shift from a discipline-based, or even task-based curriculum towards problem-based instruction; and from a teacher-centered towards a student-centered approach. With these shifts, the departure from the conventional methods of medical education becomes dramatic. The intention is to prepare students to think much more critically and therefore to become much more able to decide what is appropriate for their own educational and, it is hoped, for the society they intend to serve.

This strategy illustrates the potential role of educators in changing medical education, given that the training of teachers in new educational methods is frequently a powerful booster to the change process. However, problem-based learning and, even more so, problem-solving are more than didactic innovations. Above all, they offer a unique opportunity to ensure that education is appropriately matched with real-life situations and that the institution consistently performs its dual role of increasing the relevance to real health needs of both its medical education and the health services.

Using information/communication technology.

The use of infomatics in medical education may serve many purposes. One of the most important is that access to a common bank of data allows medical schools to come to grips with priority health issues in the community. This strategy uses informatics to this end.

This strategy requires that medical schools be provided with appropriate hardware and software to enable them to become active in community-based health intervention programmes. The power-brokers in medical education should then be able to appreciate that the potential of information and communication technology will enable them to exercise more effective control and leadership in the development of health care. The strategy should allow them to venture outside their usual sphere of hospital and disease-centered activities to discover areas of deficiency and to assume new or increased responsibilities for the conduct of more relevant research, service, and education.

Having been made aware of new realities and challenges in the system of health care delivery, medical educators and health managers would jointly come to realize the kinds of changes that are needed in the medical profession and in medical education and stimulate each other to undertake these changes promptly.

7.G. Continuing Medical Education.

This strategy consists of actively involving medical schools in identifying what medical practitioners need to learn in order to cope with new challenges in the health care system. The strategy will also involve medical schools in the search for suitable and appropriate educational methods that would be both effective and acceptable to practitioners to meet these challenges.

What is really at stake is the acquisition by medical practitioners not only of new scientific knowledge and an acquaintance with new technologies, but also of the skills and attitudes necessary to function properly in practice patterns that are in line with defined social and health policies and standards of quality assurance.

It is essential that the objectives for continuing education be set after a careful review of current medical practice and how it affects the health of the population. A meeting of medical practitioners, health care managers, and representatives of consumers would be a useful means towards this end.

In the process of planning, implementing and evaluating programmes of continuing medical education in close collaboration with professional associations, medical schools could learn a great deal about relevance in medical education and efficient learning.

This intense interactive process with a variety of partners should help medical schools to realize how far undergraduate medical education deviates from the ideal and inspire them to undertake a fundamental shift in their educational programme.

7.H. Establishing an experimental track with a new curriculum

In this strategy, the introduction of innovative educational methods with a group of student volunteers would be treated as a scientific experiment by the medical school. The new educational programme would run in parallel with the existing one. Indicators and criteria for comparison between the two tracks would be set.

The new parallel track should operate on one or more of the following basic principles: community-orientation; problem-based learning/problem-solving education; multiprofessional education; and close partnership between the training institution and the health care system.

Each innovation would be planned according to clearly specified technical procedures to allow for proper monitoring and evaluation of the experiment.

Expected outcomes may be expressed in terms of the competence the learners want to acquire, student and faculty satisfaction, career choice of new graduates, contribution of the training institution to community health development, etc.

The feasibility of this strategy depends on a number of conditions. These include the capability of the medical school to control the parallel track as an experiment, by controlling possible biases that might undermine its validity; the existence of sufficient technical, material, human, and financial resources to launch and maintain a separate track; and the willingness to learn from the experiment and apply the lessons learnt.

7.1. Educational Priorities For Medical School

The growth of medical knowledge and the vast differences between nations in resources for health care, demand a re-examination of the priorities, principles and purposes of medical schools.

What knowledge should they import in the time available?
Should their emphasis be on scientific training of the mind, or on preparation for delivering a service? Should they prepare doctors ready to practise independently on graduation or simply those who are ready for further post-graduate training? Will the graduates work single-handed or as part of a complex system?

A fundamental review of priorities is required.

1. Science or Service?

   The science component of M.E. must be reviewed for its applicability to health care and medical practice.

2. Competence in preparation for further learning.

   Medical students must be helped to acquire the habit of life-long learning.

3. Competence in individual diagnosis and management.

   Curricula must be designed to ensure that students have the opportunity to achieve this objective.

4. Competence in Community Health.

   Students must acquire the ability to promote health as well as deal with disease, not only in individuals but also in population.

5. Competence on Collaboration.

   The medical curriculum must be re-oriented to ensure that medical graduates learn to work effectively as members of a team.