DOCUMENT RESUME

ED 354 821 HE 026 241

TITLE	Changing Medical Education: An Agenda for Action.
INSTITUTION	World Health Organization, Geneva (Switzerland).
REPORT NO	WHO/EDUC/91-200
PUB DATE	91
NOTE	30p.
PUB TYPE	Information Analyses (070) -- Viewpoints (Opinion/Position Papers, Essays, etc.) (120)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Delivery Systems; Educational Assessment; *Educational Change; Foreign Countries; Futures (of Society); Global Approach; *Health Services; Higher Education; *Medical Education; Medical Schools; Physicians; Program Implementation; Standards; Surveys
IDENTIFIERS	*Physician Role; World Health Organization

ABSTRACT

This paper presents an agenda for worldwide change in medical education to meet current and future requirements of society. The first of four sections offers the central arguments for change in medical education noting global patterns in the search for better use of resources for health care, describing a profound shift underway in the present image and future role of physicians, and the challenges of implementing the necessary changes in medical higher education. The second section outlines the paper's agenda for change which consists of three components: (1) setting standards and developing tools for assessment; (2) strategies for change; and (3) follow-up through worldwide monitoring. This section also argues that change calls for an awareness of the need for change, providing support for those who experience behavioral change and fostering a sense of solidarity among those involved in similar change dynamics. A third section looks at why this agenda must be a global one and describes a proposed partnership in action for implementation of the agenda's components. The final section proposes a tentative plan for changing medical education including a 5-year projection and budget estimates. This section also includes a partnership profile survey to be completed by institutions participating in the agenda. (JB)

CHANGING MEDICAL EDUCATION

An Agenda for Action

WHO/EDUC/91.200
DISTR.: GENERAL(E)

WORLD HEALTH ORGANIZATION

ORGANISATION MONDIALE DE LA SANTE

CHANGING MEDICAL EDUCATION

An Agenda for Action

World Health Organization
Division of Development of Human Resources for Health
Geneva, Switzerland
1991

CHANGING MEDICAL EDUCATION

An Agenda for Action

Brief presentation

The three components of the Agenda:

- Setting standards for quality medical education and developing tools for assessment.
- Designing and implementing strategies for changing medical education.
- Follow-up of progress through monitoring world-wide.

The main features of the Agenda:

- Providing a base for a managerial approach to the introduction of change.
- Opening options for action/research in the implementation of strategies for change.
- Strengthening and extending international collaboration through a wide-ranging partnership.

Content

"Changing medical education, An Agenda for Action" is an initiative to organize 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. By doing so, the Agenda for Action will also contribute to our understanding of the dynamics of change in training institutions and the relationship of these institutions to their communities.

The Agenda for Action will rely on a wide variety of talents and resources that are available across the world to implement a programme for the improvement of social relevance and efficiency in the education of medical practitioners, executed in a spirit of social justice and scientific rigour.[1] [2]

WHY CHANGE MEDICAL EDUCATION?

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 suffering and death through disease. The search for the best possible care of the sick and suffering is needed and demanded now more than ever.

Perspective of change in the health system

The better use of resources for health care and the need for additional resources is common to both rich and poor countries. So, too, is the search for satisfactory patterns of health services to meet new and growing demands emanating from the consumer's expectations, the sharing of responsibility for the maintenance of health between providers of health care and consumers, the division of labour among the health and health-related professions, and the collaboration of the health sector with other development sectors. The goal of "Health for All" is far from being achieved. [3] [4]

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[1] WHO Technical Report Series, No. 717, 1985 (Health manpower requirements for the achievement of health for all by the year 2000 through primary health care: Report of a WHO Expert Committee).

[2] Resolution WHA40.14 (1987).

[3] Alma-Ata 1978: primary health care. Report of the International Conference on Primary Health Care. Geneva, World Health Organization, 1978 ("Health For All" Series, No. 1).

[4] Alma-Ata reaffirmed at Riga: a statement of renewed and strengthened commitment to Health for All by the Year 2000 and Beyond adopted at a WHO meeting: From Alma-Ata to the Year 2000: a midpoint perspective, Riga, USSR, 22-25 March 1988. Geneva, World Health Organization, 1988 (Unpublished Document WHO/SHS/88.2).

Although all health personnel are expected to play a role in shaping and operating health systems, doctors continue to hold the key positions. However, while the medical profession has enjoyed a position of leadership in policy-making and has been accorded respect and deference by society, this position is slowly being eroded, and with it the social image of the entire health profession.

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.[5]

Present image and future role of the medical profession

However, one of the fundamental reasons for dissatisfaction remains a general lack of competence on the part of the medical and health professions to meet new challenges: increased emphasis on the humanization of care, integrated care, more consumer participation, equal access to care, assessment of technology, cost containment, consideration of the population perspective in planning health care, protection of the environment, promotion of healthy lifestyles, etc. A new era, the search for a new paradigm that integrates all these factors, has begun.

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

They should also be capable to apply critically the latest technologies in the health sciences and make decisions that take into account ethical, financial and multifaceted issues. They will need to strike a balance between the expectations of their patients and of society at large. In order to have a better understanding of health needs in relation to the total requirements of an individual and of the community, they should be capable to continue their work with others outside the health sector, and make better use of information and managerial techniques in the planning and execution of their work.

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 a 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.

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[5] Willis, D. ed. "The changing character of the medical profession." The Milbank Quarterly, 66, Supplement 2, 1988.

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.

No single institution is permanently in control of change. The search for relevance is a dynamic and never-ending process that can be initiated or boosted by one or another factor, depending on circumstances.[6]

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.

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 of 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, the **"Agenda for Action"** addresses this issue by opening a wide dialogue and by searching for a consensus among all parties concerned in the changes that are required in both 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.

The impact of the **"Agenda for Action"** largely depends on what it consists of and on the manner in which it is carried out.

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[6] Bok, D. Beyond the ivory tower: social responsibilities of the modern universities. Cambridge, MA, Harvard University Press, 1982.

WHAT IS THE AGENDA?

The Agenda consists of three components:

1) setting standards and developing tools for assessment
2) strategies for change
3) follow-up through monitoring world-wide.

The change process

An analogy could be drawn between these three stages in the process of changing medical education and the effort required to change individual behaviour.

Each calls for creating an awareness of the need for change, providing support for those who experience behavioural change, and fostering a sense of solidarity among those involved in similar change dynamics, to lessen the possibility of a return to previous behaviour.

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

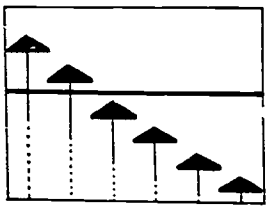
It should be noted that the Headquarter and Regional Offices of the World Health Organization have been involved in the last two decades in many activities aimed at improving the relevance of medical education and the way students learn. Many meetings have been organized, a large number of assignments have been carried out by consultants, and numerous fellowships have been awarded in each year. All these efforts have been made to support Member States in their endeavours to reorientate medical education more specifically towards social relevance.

It is felt that the time is now appropriate for the World Health Organization to use this rich experience in order to assist countries in developing norms for quality medical education, together with workable strategies for meeting these norms.

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

COMPONENT I.
OF THE AGENDA

SETTING STANDARDS AND DEVELOPING 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.

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 new mandate for medical schools

A. active participation in the improvement of the quality and coverage of 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 processes in health sciences;

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

These 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 D).

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

Although caution would be in order to avoid becoming too prescriptive and to allow for local variation, a measuring tool would certainly help to introduce more objectivity into the appraisal and monitoring of medical education.

The search for references and objectivity

Uniform medical curricula and standard certification of medical graduates throughout the world are not advocated, as it is the prerogative of individual countries to determine the shape of medical education and the conditions for licensure, according to the specific requirements of their environment.[7]

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.

These tools should guide national authorities in deciding on the political, administrative and financial actions to be taken to improve the training and employment of their doctors. The tools should be equally useful at institutional level when determining the educational, technical, managerial, and logistical actions needed to improve medical education, as well as its impact on the community.[8]

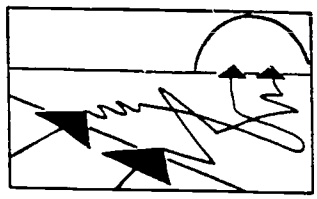
The list of indicators should be established as the result of wide consultation, to ensure that it will be meaningful and acceptable to policy-makers and programme managers. It will be at the discretion of each country, and sometimes of each medical school, to decide which indicators to retain that best 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. Action research should therefore be encouraged as a means to that end.

[7] Bandaranayake, R.C. "Implementing change in medical education in developing countries." Medical Teacher, 11 (1): 39-46 (1989).

[8] Boelen, C. A call for systematic action for changing medical education: reaction of working partners. Medical Teacher, Vol.12, No, 2, 1990.

COMPONENT II.
OF THE AGENDA

STRATEGIES FOR CHANGE



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

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 will be proposed and should be considered as optional 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 incorporate most of the other strategic approaches. The choice may depend on local opportunities and resources that will help to maximize initial success.

We will consider:

The question remains: how can change be brought about?

A. Possible strategies for change.
B. How to select a particular strategy.
C. How to develop a strategy for change.

A. 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**
9. **Establishing an experimental track with a new curriculum.**

Strategies for change can be classified into different categories, such as : comprehensive analysis of health personnel (strategies 1 and 2); intersectoral action for health (strategies 3 and 4); issues related to the medical profession (strategies 5 and 8); use of new methods and techniques (strategies 6,7 and 9). Many more points of entry can be devised for introducing sustainable change in medical education.

Let us now review the main features of each strategy.

1. 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.

To make optimal use of health professionals implies that an appropriate number and mix of health professionals is produced with the skills to meet local needs, and that these professionals are suitably employed within the limits of available resources.

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.

What is at stake here is finding a compromise between thc ough, long-term action and urgent remedial measures for change in the recruitment, training and maintenance of health professionals.

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 appropriately.

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.

2. **Search for national consensus**

Here the issue of changing medical education and medical practice is brought into the open and debated publicly. Representatives from the political world, the health professions, health services administration, health insurance, universities, and consumer groups are invited to express their opinion about the medical profession and what they expect from it. This wide consultation could be covered by the media to make it a national issue.

These discussions should achieve a common understanding of the present and future role of the doctor in society. Such an exchange of views should also delineate the respective responsibilities of the education system and the health care system for ensuring that the required skills of the physician can be acquired and practised.

The decision to open a public debate should be made by all parties concerned if they agree that it would be both desirable and productive. Although controversy may not necessarily jeopardize the strategy, all parties should at least agree to abandon their status-quo and accept that change is welcome.

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". The next step in the process would be the preparation of a blueprint indicating the kinds of changes that have been recommended, the mechanisms for their implementation and a support system to facilitate the changes. It should also include provision for rewarding those who are willing to venture into new territory.

Looking ahead, an action plan for changing medical education should be proposed and adopted in consonance with the blueprint. 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.

All this may be accompanied by rigorous negotiation between groups with conflicting interests, even if this is not publicly known or admitted. The strategy may suit those countries which enjoy a particularly favourable political situation, it may even offer them a unique opportunity to openly explore possible ways to change medical education and the medical profession.

3. Initiative by the university

A university may wish to participate in the development of the health of a community by directing part of its research and education towards the priority issues and concerns that the community has identified. Several faculties or departments, including the medical faculty, may wish to combine their strengths to achieve common goals in their community or in society at large.

The feasibility of such an initiative depends on the university's ability to fulfil three prerequisites:

- identification of priority health or priority health management problems in and with their community;
- development of a management system to ensure smooth, productive, and mutually beneficial inter-faculty or inter-departmental collaboration;
- building a strong partnership with the key actors in the community where the initiative is to be centred - local civic authorities, health authorities, professional groups, voluntary organizations, etc. - and serve as the coordinating catalyst among them.

These conditions present real challenges to the staff of a university or a similar institution of higher education because few of them are likely to have developed skills in listening to, and learning from the community. However, the process proposed for implementing this strategy would offer opportunities to reflect on and search for the most expedient patterns of comprehensive health care delivery that can incorporate intersectoral action, consumer participation, and sound health management practices.

The task is complex but stimulating. It is probable that the participating faculties would come to recognize the degree of relevance or irrelevance of current educational programmes. Although universities and other institutes of higher education without medical education can initiate an intersectoral health development initiative, this strategy only considers universities with a medical school.

Essentially, the strategy consists of creating an environment conducive to making universities much more socially accountable. Opportunities would be offered that are intended to attract several departments/faculties, including the medical school, and involve them in collaborative programmes of health orientated intervention. This involvement would eventually prompt them to adapt their educational policies and programmes to new social goals and to identify innovative ways to achieve them.

4. Population 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.

Senior clinical teachers and researchers may find it rewarding to be designated as the national, regional, or local coordinator of a community health intervention programme against a defined health hazard. 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 programmes, particularly in community diagnosis, epidemiological analysis, and health management.

More important, the training institution 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.[9]

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.

5. Addressing an important 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, road accidents.

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.

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[9] WHO Technical Report Series No. 746,(Community-based education for health personnel : Report of a WHO Study Group), 1987.

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. This strategy differs only slightly from Strategy 4 "Population Perspective" because it is initiated by social pressure.

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.

6. 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).[10] [11]

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-centred towards a student-centred 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 education and, it is hoped, for the society they intend to serve.

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[10] Barrows, H.S. & Tamblyn, R.M. Problem-based learning: an approach to medical education. New York, Springer, 1980.

[11] Barrows, H.S. "Inquiry: the pedagogical importance of a skill central to clinical practice. Medical Education, 24:3-5 (1990).

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.

7. Using information/communication technology

The use of informatics 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.

Informatics can be used to make information on a given population or high-risk group available to health care planners, epidemiologists, practitioners, medical educators, researchers, medical students, local authorities and voluntary organizations.

This provision of information could be the means of establishing a new rapport between the key actors for planning, management and evaluation of community health programmes and should constitute a coordinating mechanism.

This is based on the assumption that informatics can help to meet the expectations of different groups of health operators for the assessment of health needs, allocation of scarce resources, new and rewarding divisions of labour and quality control. 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-centred 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.

8. 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. In their contact with health care administrations, medical schools would also have an opportunity to question the impact of continuing education, as well as undergraduate and postgraduate education, on the quality of health care.

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 programmes.

9. 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.[12]

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.

[12] Kantrowitz, M. & Kaufman, A. et al. Innovative tracks at established institutions for the education of health personnel: an experimental approach to change relevant to health needs. Geneva, World Health Organization, 1987 (WHO Offset Publication No. 101).

B. HOW TO SELECT A PARTICULAR STRATEGY FOR CHANGE

... just one entry point

The list of strategies that has been presented above is surely not exhaustive. They can be adapted and additional strategies can be formulated. It is important that countries or individual medical schools start with a specific approach that suits their particular sociocultural and political environment. It is worth recalling that, no matter which strategy is selected as an entry point, the requirements entailed in most of the other strategies will have to be met as well, at a rate and in a sequence that fits the local context.

A comparative review of the advantages of each strategy would help in selecting the most suitable. This could be accomplished by a matrix matching each strategy with different factors found within or outside educational institutions that would influence the decision to choose a particular strategy. A weighted response would quantify the assessment and help in ranking strategies in the order of their appropriateness to the particular national or local situation.

A set of indicators for factors extrinsic to educational institutions may include:

Guidance for selection

- overall policy (need for reforms imposed by the socioeconomic situation, political pressure, etc.);
- health policy (degree of social orientation, awareness of need for change, etc.);
- education policy (demographic factors, literacy and educational level, degree and nature of autonomy of universities, etc.);
- education-employment relationship (social involvement of training institutions, new job opportunities, etc.);
- present and potential crisis (new exigencies of various segments of population, etc.);
- pressure groups (forces in the community, sponsorship, international linkages, etc.).

Factors intrinsic to educational institutions, i.e., medical schools, may include:

- leadership (committees, personalities, etc.);
- teachers (pressure groups, existence of political activists, networking, etc.);
- students (pressure groups, etc.);
- change agents (competence, continuity, etc.);
- opportunities (special resources, special circumstances, etc.).

Under some circumstances, an on-site visit by an outside expert, either in the capacity of a consultant to local/national authorities or as a facilitator in a workshop situation, may be advisable to smooth the decision-making exercise.

C. HOW TO DEVELOP A STRATEGY FOR CHANGE

The formulation and implementation of strategies for change should be considered as projects of action research. Protocols would be developed outlining the main characteristics of each strategy. The protocols would then be proposed to the main actors in the reform of medical education to make them fully aware of the requirements and constraints.

"How to do it" protocols

Each protocol would describe the optimal conditions and circumstances for introducing the strategy and propose essential guidelines for its implementation to allow the responsible authorities to assess the feasibility of this particular strategy in their given socioeconomic context. Standard protocols would be designed to serve as basic references, but constantly improved upon in the light of experience, and variations capable of adaptation to specific situations would be welcome. Experts in medical education would be called upon to develop these protocols.

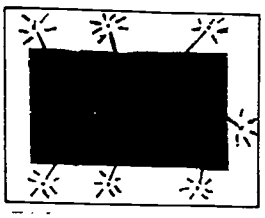
When the protocols are ready for implementation, reformers will have to be aware of the dynamics of change, of the extrinsic and intrinsic, positive and negative, existing and potential forces and their possible interaction (see also "How to select a particular strategy for change"). Change may be planned over a number of years, and the intentions may be made clear through an overview of the main objectives and activities that will be involved.

Critical events to be anticipated in the process of change could be marked on the schedule, and ways of monitoring progress should be indicated. [13]

The use of a rigorous methodological approach would be stressed to ensure proper planning, monitoring and evaluation, as well as the comparison of different strategies for change at different times and in different places.

[13] Mennin, S. & Kaufman, A. "The change process and medical education." Medical Teacher, 11, (1): 9-16 (1989).

COMPONENT III
OF THE AGENDA



FOLLOW-UP THROUGH WORLD-WIDE MONITORING

A close watch should be maintained on worthwhile endeavours and achievements in adjusting medical education which result in the improvement of the health of the population. Countries, institutions, and individuals engaged in a change process are always eager to learn from the experiences of others in order to improve their own practices. Keeping each other up to date creates solidarity among those who have the courage and take the risk to break with the status quo, and encourages them to persevere in these innovations.

A follow-up of change in medical education through world-wide monitoring will serve several purposes:

Monitoring progress as a service

- First, it provides a register of successful innovations reflecting agreed values and standards.
- Second, it provides an up-to-date list of the implementation of the various strategies selected by countries/medical schools.
- Third, it encourages the establishment of an important channel of communication among the groups engaged in similar strategies of change.
- Fourth, it provides funding and sponsoring agencies with a global picture of what is being accomplished and, therefore, of what remains to be done and what further support is needed.
- Fifth, it is a measure of world-wide progress towards "appropriate" medical education and is therefore a useful management tool for the **"Agenda for Action"**.

The systematic monitoring of change in medical education lends credibility to the Agenda for change. Monitoring provides information for comparisons of time and place, it provides the base for objective analysis, and it gives ample opportunities for leaders in medical education to decide on the appropriateness and feasibility of each strategy.

Global mapping of the progress of each change strategy, and the ability to retrieve this information through indicators that reflect the values of medical education, would be among the important functions of world-wide monitoring. As far as possible, technology should be used to enable a central unit to record, analyse and retrieve information about the latest developments in medical education. The validity of the information should be checked, and up-to-date print-outs and diskettes should be available on request.

The prerequisites for, and the feasibility and cost-benefits of a world-wide monitoring system, should be scrutinized realistically.

WHY A GLOBAL AGENDA?

The subject of quality medical education has received renewed international attention since World War II, some forty years after Flexner's report in 1910 questioning the scientific value of medical education of that time. Through the development of communication, the vast and growing exchange of scientific information, and WHO's consistent role in fostering relevant education for health professionals, medical education has gradually gained respectability and legitimacy as a discipline, and has eventually become recognized as a subject of international concern.

In the nineteen-eighties, extensive reflection on the state and fate of medical education was undertaken by countries, universities, educators, professional groups, and international organizations. This particularly active period has helped us to understand not only that change in medical education is a universally accepted prerequisite to the improvement of equity and quality in health care, but also that a coherent and global plan of action to achieve that change is highly desirable and necessary. The Edinburgh Declaration, issued at the World Conference on Medical Education, is a clear expression of the necessary directions for change.[14]

The basic reasons for a world agenda are: the many commonalities in the aims for change world-wide; the need for an easy and speedy exchange of experiences; the trend towards upgrading medical education as a scientific discipline; the wish to exchange information internationally and to develop an "esprit de corps" among political and technical forces engaged in changing action globally.[15]

Human rights and "Health for All" are universal values. Similarly, efforts to reorient health systems, social systems, and educational systems towards the achievement of a better state of individual and collective well-being deserve attention on a global scale. The change in medical education, and change in the better use of medical and health professionals should be seen within that perspective.

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[14] World Federation for Medical Education. Report of the World Conference on Medical Education, Edinburgh, 7-12 August 1988.

[15] "Strategies for developing innovative programs in international medical education: Proceedings of the International Invitational Conference," United Nations, New York, July 14-15, 1988. Academic Medicine, 64 (5): Supplement (1989).

PARTNERSHIP IN ACTION

The implementation of the three components: 1. Setting standards and developing tools for assessment; 2. Strategies for change; 3. Follow-up through monitoring world-wide, would only be possible through a wide ranging partnership.(*)

Setting directions

Component I (Setting standards and developing tools for assessment and Component III (Follow-up through monitoring world-wide) of the **"Agenda for Action"** would require extensive consultation and cooperation from expert groups, as well as from numerous others working in medical education and related fields.

Future directions and progress in the **"Agenda for Action"** would need to be discussed and reviewed from time to time through international meetings.

Use of existing expertise

Expertise in medical education should be mobilized and fully used to plan and implement the three components of the **"Agenda for Action"**.

Countries or medical schools may call for technical advice from within or outside the country to assist in selecting a strategy and/or adapting the protocol of a given strategy to the local situation. Further assistance may also be needed to implement their strategy.

Manuals could be produced for reformers in medical education, to translate into pragmatic advice and concrete operational terms concepts such as community orientation in medical education, problem-solving/problem-based learning, team training and team work, intersectoral work in health, action/research in population medicine, and quality assurance in medical practice.

State of the art documents, progress reports, and case studies on strategies for changing medical education would be published.

Contract negotiation

A contract would be negotiated on a "give and take" basis with schools or countries interested in change. Criteria for designating schools or countries eligible for such arrangements would be proposed.

Funding agencies would ensure support in terms of staff training, transfer of technology, supply of essential equipment, expert consultantships and exchange of information. Recipient schools or countries would, in return, use funds to increase the wealth of knowledge on optimal ways of managing the resources and potential of medical schools for the improvement of the health of their population.

(*) see also page 24 "Partnership profile".

Action/research protocols would provide information for determining sets of activities, a time frame, managerial procedures, and expected outcomes for each project. Individual countries would exercise control over the implementation of the contract through recognized national bodies.

Outside consultants could be engaged for planning and evaluation.

The World Health Organization, at all levels of its organizational structure, will contribute to the coordination of the implementation of strategies for change.

Sponsoring and funding agencies

Active international support is essential for a successful global initiative to change medical education.

Sponsoring and funding agencies may wish to contribute to the implementation of specific sections of the **"Agenda for Action"**, in accordance with their own mandate and commitment to the international development of health.

*

The World Heaith Organization, encompassing WHO Headquarters, WHO Regional Offices, WHO Collaborating Centres, and non-governmental organizations affiliated with WHO, welcomes any collaboration with bilateral programmes, non-governmental organizations, international organizations and associations, foundations, national institutions, expert groups, and individuals to launch, implement, and govern the activities of the **Agenda for Action in Changing Medical Education** in full respect of WHO's mandate to raise the status of health of every individual and community to the highest possible level.

*

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ANNEX

TENTATIVE PLAN OF OPERATION

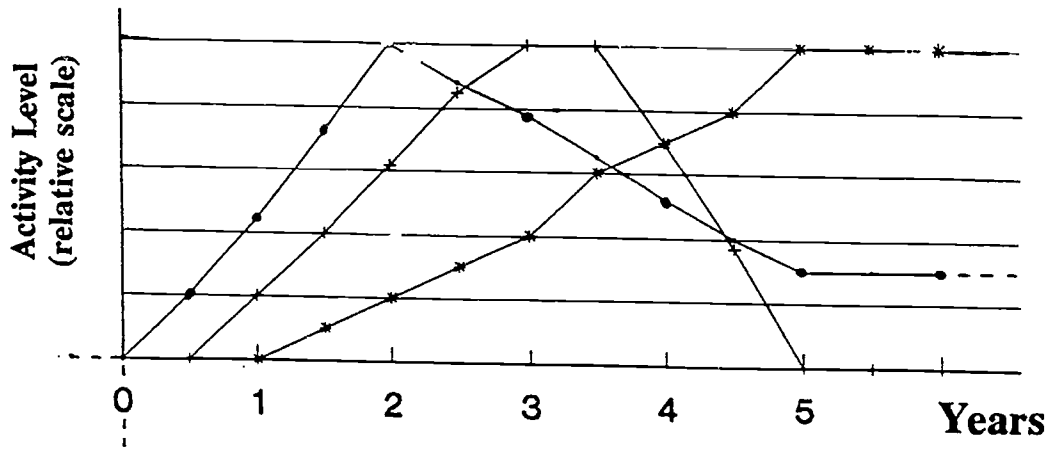
for

CHANGING MEDICAL EDUCATION

AN AGENDA FOR ACTION

The Five Year Projection

The "Agenda for Action" proposes to concentrate on a five year period during which intensified action will be carried out in the areas of promotion, methodology and action/research. Year one in the five year projection diagram stands for 1991.



= Promotion; = Methodology; = Action/Research.

Activities related to the Five Year Projection will include:

Promotion:
- advocacy and representation at international fora;
- production and dissemination of materials introducing the **"Agenda for Action"**: brochures, videos, posters, etc;
- publication of progress reports;
- fund-raising;
- contracts with WHO Collaborating Centres, NGO's and specialized groups.

Methodology:
- design, testing and validation of measurement tools for quality of medical education;
- design of protocols for the implementation of strategies for changing medical education;
- publication of "state of the art" documents, case studies, articles and progress reports;
- design, testing and establishment of a monitoring system for the follow-up of progress in medical education.

Action/Research:
- contracts with selected countries/institutions which are experimenting with strategies for change;
- technical support for countries/institutions implementing strategies;
- meetings of experts to review problems of implementing strategies, assess progress and advise on corrective measures.

BUDGET ESTIMATES

The following budget estimates for promotion, methodology and action/research (see page 22 "Five-year projection") and international meetings were calculated using December 1990 figures.

PROMOTION

It is estimated that an amount of US$100,000 will be needed during the period 1991-1992 to carry out the activities outlined on page 22.

METHODOLOGY

It is estimated that an amount of US$150,000 will be needed during the period 1992-1995 for contractual services and publications.

ACTION/RESEARCH

It is estimated that the "Agenda for Action" should be able to lend support to projects in about 20 medical schools, in partnership with WHO Regional Offices, at a rate of approximately US$100,000 per school, during the period 1992-1995, to experiment and implement strategies for changing medical education. Each project would be intended to cover a four to five-year period, including follow-up.

The total requirement for action/research would amount to US$2,000,000.

INTERNATIONAL MEETINGS

It is proposed to organize two international meetings in the course of 1991-1995 in collaboration with WHO Regional Offices and WHO Collaborating Centres.

It is estimated that an amount of US$250,000 will be required for this purpose.

TOTAL

The total budget estimated for the "Agenda for Action" amounts to US$ 2,500,000.

PARTNERSHIP PROFILE

This chart seeks to collect information on commitments of potential partners wishing to collaborate in the design, implementation and/or sponsorship/financial support of the various projects entailed in the "Agenda for Action" as outlined in the background document.

PROJECT	DESIGNERS	IMPLEMENTERS	SPONSORS(*)
1. **Setting standards and developing tools for the assessment of quality in medical education (QME)**			
11. Literature review			
12. Indicators of QME and tools of assessment			
13. Testing of tools of assessment			
14. Other			
2. **Promotion of Agenda for Action**			
21. Production of materials (brochures, posters, videos)			
22. Fund-raising			
23. Other			
3. **Strategies for Change**			
31. Protocol format for implementation of strategies			
32. Selection of strategies			
33. Specific protocols for implementation of strategies			
330 Population perspective			
331 Problem-based learning/ problem-solving education.			
332 University initiative			
333 Optimizing human resources for health			
334 Search for national consensus			
335 Using information/ communication technology			
336 Addressing important public health problems			
337 Continuing medical education			
338 Experimental track			
339 Other			

PROJECT	DESIGNERS	IMPLEMENTERS	SPONSORS (*)
4. Action/research(A/R) in 20 medical schools/countries			
41. Eligibility for A/R projects			
42. Technical support for medical schools/countries applying A/R strategy			
43. Other			
5. Publications			
51. Strategies for changing medical education			
52. State of the art publications (see specific strategies)			
53. Case studies			
54. Progress report			
55. Other			
6. Meetings			
61. For advertising the agenda			
62. For coordinating partners in action			
63. WHO study group on problem-solving education (1992)			
64. For progress review and future directions			
65. Other			
7. Monitoring of change			
71. For establishing a data bank (refer also to no. 54)			
72. For networking purposes			
73.			

WHO Regional Offices

Africa: WHO Regional Office for Africa, P.O. Box 6, Brazzaville, Congo.
Telegram: UNISANTE BRAZZAVILLE. Telex: 5217. Fax 242 83 18 79. Tel: 242 83 38 60.

Americas: WHO Regional Office for the Americas - Pan American Sanitary Bureau, 525, 23rd street N.W., Washington, D.C. 20037. USA. Telegram: OFSANPAN WASHINGTON. Telex: 248338. Fax 1 202 223 5971. Tel: 1 202 861 3200.

Eastern Mediterranean:

WHO Regional Office for the Eastern Mediterranean, P.O. Box 1517, Alexandria 21511, Egypt.
Telegram: UNISANTE ALEXANDRIA. Telex: 54028. Fax 20 3 483 8916. Tel. 20 3 482 0223.

Europe: WHO Regional Office for Europe, 8, Scherfigsvej, DK-2100 Copenhagen 0, Danemark.
Telegram: UNISANTE COPENHAGEN. Telex: 15438. Fax 45 31 18 11 20. Tel. 45 31 29 01 11.

South-East Asia: WHO Regional Office for South-East Asia, World Health House, Indraprastha Estate, Mahatma Gandhi Road, New Delhi-110002, Inde.
Telegram: WHO NEW DELHI. Telex: 3165095. Fax 91 11 331 8607. Tel. 91 11 331 7804.

Western Pacific: WHO Regional Office for the Western Pacific, P.O. Box 2932, Manila 1099, Philippines.
Telegram: UNISANTE MANILA. Telex 27652. Fax 63 2 521 1036. Tel. 63 2 521 8421.

WHO Collaborating Centres in the field of Educational Development

WHO Collaborating Centre for Integrated Health Service Training and Development. Center for Health Sciences, Ben Gurion University of the Negev, P.O. Box 2053, Beersheva, Israel.

WHO Collaborating Centre for Human Resources Development, Faculty of Health Sciences, McMaster University, 1200 Main Street West, Hamilton, Ontario L8N 3Z5. Canada.

WHO Collaborating Centre for Health Manpower Development, Faculty of Medicine, University of Limburg, P.O. Box 616, 6200MD Maastricht, The Netherlands.

WHO Collaborating Centre for Research in Health Manpower Development, Faculty of Health Sciences, University of Ilorin, P.O. Box 1515, Ilorin, Nigeria.

WHO Collaborating Centre for Medical Education, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

WHO Collaborating Centre for Dissemination of Community-Oriented, Problem-Based, Medical Education, School of Medicine, University of New Mexico, Box 517, Albuquerque, New Mexico 87131, USA.

WHO Collaborating Centre for Health Manpower Development, Faculty of Medicine, Suez Canal University, Ismailia, Egypt.

WHO Collaborating Centre for Health Personnel, Département de pédagogie des sciences de la santé, Université Paris-Nord, 74 rue Marcel Cachin, 93012 Bobigny, France.

NGOs in official relations with WHO in the field of Educational Development

Network of Community-Oriented Educational Institutions for Health Sciences
University of Limburg, P.O. Box 616, 6200MD Maastricht, The Netherlands.

World Federation for Medical Education
Central Office, International Medical Education, University of Edinburgh,
Teviot Place, Edinburgh EH8 9AG, Scotland, United Kingdom,
and its six regional associations for Africa, The Americas, Eastern Mediterranean, Europe, South-East Asia, and the Western Pacific.

International Federation of Medical Students' Associations
Faculteit der Geneeskunde, Academisch Medisch Centrum, Meibergdreef 15, 1105 AZ Amsterdam, The Netherlands.