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Medical Education
Teaching of Community Medicine
Alternative medical education
Preventive and Social medicine

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Foreword

This book has its origins in the conference on Alternative Medical Curriculum organised by the Gonoshasthaya Kendra, (GK) Bangladesh in March 1983. Some members of the medico friend circle (mfc) had received an invitation to this conference in mid 1982. A critique of the existing pattern of medical education, which was always on the mfc agenda, assumed an immediate significance.

Though the more active amongst mfc members had expressed their views in the mfc bulletin there was no in depth discussion on it in mfc. At this point, however those members who were to in a way represent mfc at the GK conference felt the need for an in-depth discussion and a consensus support from the group.

In February 1983, a discussion was planned on the day following the Annual Meet held at Anand. The aim was to help mfc participants in the GK conference to contribute to the conference and hence to "discuss the question of medical education concretely" after agreeing upon certain broad principles.

After the GK conference, it was decided to pursue the question of medical education by devoting the forthcoming Xth Annual Meet at Calcutta to this theme. It was attended by a large number of medical students, and interns from Calcutta, Calicut and a few other medical colleges.

Informal exchange of views have since then continued with medical students as well as doctors who have left their medical college era far behind.

The present anthology therefore, is an outcome of a long process of serious discussion, study and sharing of views and experiences by a large number of people, both from within the mfc as well as outside. It

also carries the inevitable stamp of the experiences of the early members of mfc. After all, mfc has been an off shoot of the student's movement of the pre-emergency period.

We are very happy to present this anthology — the fourth from mfc — to you, dear readers. This anthology has now assumed a topical relevance in the light of the proposal to experiment with an alternative curriculum in a few of our medical colleges. We are sure you will find it interesting and hope that it would spur further debate on this theme.

We shall consider our effort worthwhile, if this begins a process of rethinking amongst the medical students, medical teachers and others involved with medical teaching. What follows is *only one of the alternative views possible*. Our wish in presenting this view is to begin a dialogue which, while aiming at a fundamental change in the process of education, at least culminates in far reaching and real reforms in the present pattern of medical education. Your active participation in this process is essential.

This anthology of articles and papers looks at some of the important aspects of medical education, making a critique of the existing pattern and suggesting, explicitly or implicitly, alternatives. Some of the ideas put forward here, may sound utopian, but as a friend always likes to put it, "was not the idea of Independence of India thought to be utopian in 1920's"?

An alternate medical curriculum, reporting on the Anand discussions, reflects the general direction of what is to follow. In this anthology, we present a historical outline (*150 year's of Medical Education, Recommendation on medical education*) of the progress of medical education critiques of some of the assumptions made while formulating the existing curriculum (*Pre-requisites*), methodology of training (*Critique of existing methodology...*) methodology of teaching a particular subject (*A note on teaching of community medicine...*, *Medicine and Society...*) and of ideological underpinnings in medical education (*Sociology and Ideology in Medical Education, Medicine and Society...*). We suggest alternatives by pointing to experiences in other countries (*Innovative Programmes: case studies*) or by suggesting ex-

periments in some areas (*Integration of Traditional Medicine and Modern Medicine...*, *Sociology and Ideology...*, *Pre-requisites...*) or by suggesting reforms in the existing pattern (*Critique of the existing methodology...*, *A note on the teaching of community medicine...*).

This anthology is an outcome of prolonged and extensive discussions within and outside mfc. In this respect, it has been a truly collective effort. However, we feel particularly grateful to Dr. Zafarullah Choudhury and other friends from Gonoshasthaya Kendra, Bangladesh, without whose challenge by way of the invitation to the conference on Alternate Medical Curriculum, we would not have been motivated to undertake an extensive debate on this extremely important theme. It is always difficult to choose from mfc members who and whom not to thank, all the more difficult this time, because almost all of the active members - the core-group - pooled in their ideas and experiences to come out with this concrete critique of the existing medical education. I would like to mention here the special efforts of Anant Phadke, who as the then convenor responded to GK's invitation by initiating a discussion within mfc and of Ravi Narayan, who as the convenor for 1984 and 1985 first perceived the need for an mfc statement on medical education and mooted the idea of this anthology. Without their efforts this anthology would not be in your hands now.

And finally, it is you dear readers, who have given us the necessary encouragement to publish our fourth book, by showing an avid interest in the topic. We thank you for that.

— Dhruv Mankad
Editor

Introduction

As Anant Phadke, mfc's convenor at the time of the GK conference, aptly put it "Medical education involves specialised technical training. But that is not all. A medical student imbibes certain values - medical education imparts a certain conception of causes of diseases in our society and their remedy, and the role of doctors in the remedial strategy. He/she imbibes the values of today's medical profession from his/her daily contact with the teachers: attitude towards the poor and rich patients, nurses, drug companies, social aspects of health care etc. etc. By the very nature these conceptions relate to social reality and are not technical questions. An alternative medical curriculum and teaching method should build up alternatives on all aspects of medical education..... The clinical/technical aspect is never purely technical but has social connotations, and there is a link in the social functions of the medical profession and the technical content of medical education". Mfc believes that it is within the above framework, the whole question of medical education should be considered.

Secondly, the aspirant seeking admission to a medical college is not a blank slate. His/her education has already begun in the society and family s/he lives in. He/She carry predominant values from his/her background. They too, have a bearing upon what the doctor ultimately is going to be.

And thirdly, the values imbibed by the student during his/her period of education get further emphasized (or come in sharp conflict) in the milieu of the area and place of his/her future assignment. Further education is carried on, not only formally through journals and papers, if at all, but informally also by way of one's experiences with patients, colleagues and superiors.

Therefore, mfc believes that it is important to clearly define the following pre-requisites of a doctor, before launching any reforms in medical curriculum:

1. The social milieu of the place of work.
2. The exact role that the doctor is to play in society.
3. Criteria of selection of students.
4. Nature of the training setup.

With regards to above, mfc assumes (a) that the future place of work for a doctor would be a primary health centre type of organisation where a team consisting of doctors, paramedics and non-medical workers carry out health programmes in close association with the poor, downtrodden majority of the people living in the area. The atmosphere will be such that it would foster democratic values, mutual support and respect for human dignity and a community health point of view of the disease process.

b) that the doctor would be called upon to work in a team, as pointed out above, catering to 10,000 population.

c) that the criteria of selection would be such as to get students conforming to the value which are pro-people and democratic.

d) that the training set up would conform to the final role that the doctor is expected to play. Further that it would nurture democratic values, team work and a community health approach to diseases in society.

It must be pointed out, however, that here, we are not talking about reforms within the limits of the present system. We are talking about a radically different system altogether. Though, we are aware that there is plenty of scope even without radically overhauling the existing pattern of medical education for meaningful reforms.

Once, these 'pre-requisites' are clearly defined, then and only then, there is any meaning in discussing the methodology and content of a medical curriculum.

The existing methodology of the study of the human body and its interaction with its internal as well as external - biological, physiochemi-

cal and sociocultural - milieu, in normalcy or otherwise, converts this total and dynamic interaction into compartmentalised subject categories, viz. Anatomy, Physiology, clinical subjects and community health. Such a compartmentalised view results in the students adopting an attitude which tends to convert the lively art and science of Medical Science into pigeon holes of preclinical, clinical and paraclinical subjects. Not only does it over-burden the student with a lot of unnecessary information but the relevant logical connection between the study of basic science like Anatomy, Physiology and the disease processes encountered in the clinic and in the society is also lost on him/her.

Secondly, in the present mode of teaching, community health has been pushed into its own very special compartment. We believe that community health is not a subject, it is an attitude, an approach to the whole question of the disease process. It shifts the focus of the study of human diseases from the clinic to the society, locating it in the living interconnections with other aspects of social life like poverty, housing, sanitation or even, conflicts of interest. Thus, for example, a study of tuberculosis from a community health point of view should not involve only a study of its pathology, its clinical manifestations, its diagnosis, and its clinical management. It is atleast equally important to include its epidemiology, of factors that lead to its continued presence amongst us, including poverty, overcrowding and malnutrition, as well as the necessary remedial measures. Clinical teaching should be placed within the context of this epidemiology. An alternative methodology must continuously impress this upon the student for all the disease processes.

Thirdly, the way in which medical sciences are taught at present, reinforces certain values by its overwhelmingly didactic and theoretical approach. It inculcates an awe for authority, curbing questioning and self-search for answers. It imparts a halo to "information" as against "knowledge", to theory as against practice and to intellectual work as against manual work. An alternative methodology must overcome these weaknesses and make the education a process of participatory self learning, and learning by doing. Less lectures and more of par-

ticipatory methods like seminars can be one answer in this direction, allowing senior nurses, dressers and technicians to teach relevant topics can be another method.

The contents of the present curriculum does not seem to follow any clear cut directions. There is an overwhelming stress on the clinical and paraclinical knowledge, on the one hand, while on the other, preventive and social medicine has come to occupy an important place. Increased importance attached to paediatric and infectious diseases like TB and leprosy goes hand in hand with higher course content allowed for orthopaedics and biochemistry. In absence of a clearly defined role for the product of our medical colleges, this is to be expected. Each department pushes forward its own importance. The result is an "all round incompetence". Such a doctor is pulled by the forces of market to go towards profitable, specialised, high technology, curative urban practice. It is this implicit social function which ultimately determines the content of the medical curriculum. The content of an alternative medical curriculum must conform to the role that the doctor is expected to play. It would mean curtailing the irrelevant portions of anatomy, biochemistry, physiology and so on, though we are aware of the fundamental importance of teaching basic sciences. Its only that we do not want students to learn as much of these basic sciences as the respective experts want to teach irrespective of the needs of a "Basic Doctor". Therefore, an alternate curriculum would also mean reducing the existing burden and of learning uncommon diseases or those requiring highly specialised treatment on the one hand and putting more emphasis on frequently encountered conditions amenable to simple medical techniques for instance childhood tuberculosis on the other hand. Even such a clinical teaching must be integrated with taking a community health approach to health problems. In order to adopt a community health attitude the student may have to study newer subjects like sociology, economics, history as related to health and medicine.

Finally, we believe that education is a life long process. It continues even after one has left the formal educational institutions not only formally through journals, and papers but informally through the milieu

in which one works. As of today, we do not have any mechanism for an organised continuous education for doctors. As a result the drug companies have a field day. They fill in the lacunae with half truths regarding drugs - new or old. An alternate curriculum, therefore, must include an aspect of continuing a doctor's education beyond his/her formal college education.

An alternate Medical Education will have to tackle these issues to become an alternative in the real sense relevant to the needs of the majority of the people in our country.

— medico friend circle.

Call it by whatever name, the need is for a new breed of physician, who has a broad understanding of human biology, who is imbued with the ingredients of rural and periurban societies and their way of life, who can communicate effectively with the patient's family regarding the nature of the ailment, who can address himself to preventive aspects in the homes, who will be an effective leader of health workers, and who will use his knowledge to stimulate other community building programmes. We need in effect a social biologist. Mass public health and hospital patient care, however well developed cannot fill this gap.

— Ramalingaswami, 1968.

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**150 YEARS OF MEDICAL EDUCATION
Rhetoric And Relevance**

Ravi Narayan

I. The Background

Medical Education in India has a long history, dating back to the Vedic period. The development of Ayurveda, the training of ayurvedic doctors, the compilation of textbook (samhitas) by the physician Charaka and the Surgeon Susruta, the seven year medical course of Taxila University, the contributions of teachers like Atreya and the development of the hospital system for men and animal under patronage of Rahul, son of Buddha are well known facets of this history. With the advent of the Mughals, the Graeco-Arabic system of medicine was also introduced into the country. Through free interac-

tion with the indigenous systems it developed into the Unani system with its own chain of 'hakim' practitioners and centres of learning.

The system of medicines evolving in Europe (the Western system) was first introduced into the country by Portuguese in the 16th century with the establishment of the Royal Hospital in Goa in 1510. Two hundred years later in 1703, a rudimentary form of medical teaching was also started in this hospital. Meanwhile the East India Company had begun its mercantile operations in India and in 1679, the Madras General Hospital was built. In 1740, the medical department of the company was created and the Indian Medical Service established. Physicians and surgeons of the I.M.S. (all expatriates) trained local assistants, dressers and apothecaries to form a subordinate medical service. The first medical school to train local doctors was established in Calcutta (1922) followed by Bombay (1826) and Madras (1927). William Bentinck appointed a committee in 1833 to work out the principles on which medical education was to be established in India. The first important recommendation of this Committee was that the "principles and practice of medical science" to be taught would be in "strict accordance with the mode adopted in Europe". This, therefore, set the foundation for the evolution of a system of education cut off from its own local cultural and historical roots and completely Westward-looking in its orientation and direction.

The review that follows (Section II) will attempt to highlight chronologically the events, the developments, the experience, the attempts at re-orientation and the concerns of medical educationists in the 150 years that have followed this Committee's recommendations.

In Section III, an overview of these trends will be attempted to highlight the factors that continue to maintain the status quo of irrelevance. The National Health Policy document of 1982 describing the existing situation candidly confirms that 'the almost wholesale adoption of health manpower development policies and the establishment of curative centres based on the Western models...are inappropriate and irrelevant to the real needs of our people and the socio-economic conditions obtaining in the country!'

II. A Chronological Review (1833-1983)

1833: The Committee appointed by William Bentinck outlined six principles on which medical education should be established in India. The first medical college established in Calcutta and Madras incorporated these recommendations. Today, a hundred and fifty years later, these six principles still form the sacrosanct pillars on which the edifice of medical education in India rests.

1833-1932: The century that followed this committee's recommendations saw the following important developments. Medical colleges were established in the main centres of British India provinces. The subjects of chemistry, physiology, ophthalmology, medical jurisprudence, dentistry and hygiene were introduced into the curriculum. Admission of women was introduced and University affiliations for college were obtained. Recognition of colleges by the Royal Colleges of London Dublin and Edinburgh was received. All these took place under the strict supervision of the General Medical Council of England.

1933-1945: The Medical Council of India Act of 1933 was promulgated creating a council to provide uniform and improved standards of medical education in the country. Many provincial governments, missions and private organisations established another category of institutions called 'medical schools' to train students for the degree of Licentiate Medical Practitioners. The LMP course was for 3-4 years, often in the vernacular and the training was geared to general practice in small towns and rural areas.

In 1943, the government of British India appointed a Health Survey and Development Committee (popularly known as the Bhore Committee) to make a comprehensive survey of existing facilities for medical care and suggest the future course of developments. In [See Note] its four-volume report it suggested that the licentiate course should be abolished and India should produce 'only one and that the most highly trained type of doctor'. Such a doctor was to be 'basic doctor' combining both curative and preventive functions. The committee made important recommendations for curriculum changes to

produce such basic doctors. Two features of this report seldom highlighted but very significant are:

i. the committee emphasised that "wide margins should be allowed to individual colleges and universities to experiment with the curriculum and develop their own potentialities". This was never allowed in the decades that followed!

ii. the decision to abolish the licentiate course was opposed by a group of dissenters on the committee who felt that 'medical education' in India should develop along the experience of the 'feldshers' in Russia - this being more relevant to the Indian situation. This dissent was recorded in the report but generally ignored.

It must be recorded to the credit of the Bhore Committee, however, that it made a very strong case for a radical, social and community orientation of medical education in India so that it could serve the masses who had been ignored by earlier policies in British India. 1946-1956: India attained independence and the Planning Commission was established. The Constitution of India declared 'the right of every citizen to public assistance in the case of sickness...'. The first five-year plan was launched in 1951 with the goal 'to provide scientific medical aid to all who needed it and to promote public health and preventive medicine'. Medical education began to develop along with the health services using the Bhore Committee recommendations as the blue print. Its social objectives were reiterated in all the policy documents and there was a quantitative growth in services - both in terms of hospitals and health centres and medical colleges, heavily subsidised by the State.

The First All India Medical Education Conference was held in 1955 to outline the importance, the scope, the aims, the physical and curricular requirements of the departments of Preventive and Social Medicine that were being established in all institutions. In spite of all the radical declarations, however, no attempts were made to change the mentality that the senior members of the medical profession and teachers had inherited, nor were attempts made to open medical education to the poorer classes of society (Banerji, 1977). The elite structure controlled by the educated, westward looking upper classes

of India both among the medical profession and the political leadership continued to develop a hospital-based system on British and later American lines which catered mainly to the privileged sections in the community and supported the growing industrial interests.

1957-1967: The Government of India appointed the Health Survey and Planning Committee (popularly known as the Mudaliar Committee) in 1959 to assess the progress of medical care and education after two plans and to see whether the targets of Bhore Committee report were relevant. The Committee stressed the need for more realistic targets (modified some of Bhore Committee recommendations) and emphasised the need to shift attention from opening new institutions to improving existing services. In the field of medical education it reiterated the importance of compulsory pre-registration internship with three months rural posting and the importance of field practice areas for the new departments of PSM (where staff of both the clinical and PSM departments should participate in joint teaching programme). This was particularly important since most medical colleges till the late '50's had paid little attention to the PSM departments.

Even the Medical Council of India which was established primarily to maintain uniform standards took time till 1964 when it, for the first time clearly outlined:

- i. a curriculum of social and preventive medicine extending through the course;
- ii. the administrative, preventive and clinical objectives of rural training during rotating housemanship and prescribed it as mandatory standards for medical education all over the country.

It also stressed that the PSM curriculum was to be a joint programme with all departments to give students' a comprehensive picture of man, health and illness. Interestingly enough in the same meetings when the social orientation of medical education was being concretised the pressure to keep up with developments and standards in the west were not ignored and the Committee had no hesitation in introducing courses in Genetics Biophysics, Electronics, Space Medicine, Concepts of molecular biology, Radioisotopes and Nuclear

Medicine along with Psychology, Statistics, Elementary Social Sciences, Family Planning and all other components of the teaching in PSM. In 1960, the Indian Association for the Advance of Medical Education (IAAME) was established as an independent forum for exchange of views by medical teachers. It annual workshops and conference and its publication. The Indian Journal of Medical Education was meant to create some interest in issues relevant to medical education.

1968-1973: As part of the populist upsurge of the late sixties another medical education committee was appointed to study and recommend the changes in training of doctors in the light of national needs and resources since earlier rhetoric and recommendations were not making much of a dent in the general trends of medical education. For the first time the committee clearly defined the terms 'basic doctor'. This Committee like the previous one suggested some more changes in the curriculum in order to produce the basic doctors.

In 1972, the twenty fifth anniversary of independence became an opportunity to review the growth of medical education in the country. Statistics showed that there had been a phenomenal quantitative growth. However, in terms of the people's and country health needs the developments were far from satisfactory. Qualitatively the curriculum was still very urban-oriented with little emphasis on prevention and promotional aspects of health and education was cut off from the national programmes resulting in 'rural communities being still deprived of doctors in spite of the increase in total stock'. The Fifth Plan document stated that 'teaching in medical colleges still requires a radical change' and in parrot-like fashion it repeated the exhortation that 'the undergraduate medical education would have to be reoriented towards the needs of the country and emphasis would have to be placed on community care rather than hospital care'.

1974-1983: The last decade has seen certain changes and developments which for the first time indicate that the government and the expert committees are seriously seized with the fact that the medical education developed in the last 150 years has failed to make any impact on the health needs of the masses in our country and that a radi-

cal revision in the curriculum—in spirit, methodology and content are required. A special group of expert medical and social scientists were constituted to study the problems of 'Medical Education and Support Manpower'. Taking a very comprehensive view of the matter they have critically diagnosed the existing problem (Box on page 5).

The Committee made many recommendations of its own and endorsed some made by previous committees. It also sought to stop increase in medical colleges and admissions; to generate a manpower policy along scientific lines on a national basis; to evolve a national system of medicine by integrating modern and indigenous system of medicine; to establish a medical and health education commission to implement the needed reforms and 'initiating and nursing the change process'.

In 1979, the Sixth Plan document realistically stated that "the behaviour of a doctor as anyone else is determined largely by the socio-economic and political structure of the society and not merely the undergraduate medical education. Market improvements can, therefore, be expected only if and when the society is restructured for social justice. But within the limits placed, we can achieve a considerable amount in changing attitudes, skills and knowledge if the medical colleges restructure the educational programme". The statement was significant because it was for the first time that the planners were accepting in an official document that socio-political change was pre-requisites, before a more community/people oriented doctor or medical education process could be developed.

In 1980, a joint study group constituted by the Indian Council of Social Sciences Research and the Indian Council of Medical Research outlined an Alternative Strategy for Health for all in India. Their report initiated a nationwide debate on the subject.

The Alternative Health model had elements in it which clearly indicated the pre-requisite of an alternative socio-political structure that was 'democratic, decentralised and participatory'.

This group endorsed all the recommendations of the Srivastava Report on the re-orientation of medical education and pleaded for the re-orientation of medical education and pleaded for the abandon-

ment of the existing flexnerised model of education and 'the adoption of an interdisciplinary holistic approach' which was 'severely more practical and field oriented'. It recommended some more additions to the curriculum and suggested that a deliberate effort should be made to throw the net of selection of medical students wider so that more people whose social and cultural backgrounds were closer to the poor and under-privileged groups could be included. It also suggested that there should be a close collaboration of health services with the medical colleges.

In 1982, the Government for the first time in 35 years made a comprehensive National Health Policy statement in which it emphatically stated that "the entire basis and approach towards medical and health education at all levels should be reviewed in terms of national needs and priorities and the curricular and training programmes restructured to produce personnel of various grades of skill and competence who are professionally equipped and socially motivated to effectively deal with day to day problems within the existing constraints".

During this decade IAAME also began to consider these new issues in their annual conferences and from 1972, they began to organise students interns seminars to elicit junior doctors views on many of these matters. However, these meetings were no better than the average 'paper-reading sessions' common in professional association meeting and lacked the punch both in debate or recommendations, to make any impact.

The Medical Council of India in the same decade has been as usual very cautious in its approach to change. While not removing or altering any part of the basic curriculum, it suggests some additions in response to the recommendations of Srivastava Report and the growing dissatisfaction in government and public circles with the irrelevancies of our educational process. The curriculum as it stands today—1977, 1978 and 1981 modifications—tries to incorporate some new ideas towards a greater social relevances but its wording is both adhoc and full of jargon. The Plan itself is disjointed contradictory. For example, while preamble 1.3 states that the graduate medical curriculum is oriented towards 'training a physician of first contact who is

capable of looking after the preventive, promotive and curative and rehabilitative aspect of medicine' preamble 1.6 and 1.7 at once contradicts it by stating that 'graduate education per se cannot be tailored to a service situation' and 'has to be flexible in nature to offer a wide range of employment opportunity. However, for the first time in decades the MCI recommendations include, since 1977, a paragraph on Teachers Training Workshops for teachers of medical college on:

- i) 'problems of community health and delivery of health care, and
- ii) 'Pedagogy! are recommended. This marks the beginning of a new realisation that the major block in medical education is not 'curriculum content' or 'quality of students' but the 'disorientation of faculty'.

III. OVERVIEW

In the last 150 years Medical Education in India has continued to develop within the context of its own historical roots in the Western situation. There are many historical, socio-political, professional and other factors which have maintained this trend of inappropriateness in India. Bryant (1971) has said that 'in every corner of the world the products of such systems (i.e. doctors trained in large city hospitals modelled on the British and American pattern) have not only been unwilling to work where they are not needed, that is a familiar story—but they have had limited capability for working there. They have not been prepared to do what needed to be done'.

Some of the important factors are outlined (many of these have been further described in earlier mfc sources/bulletins).

Colonialism

Even though nearly four decades have passed since we achieved independence the colonial mentality of the medical profession, the elite bureaucracy and the political leadership have not disappeared. The 'brown sahibs' who rule Indian, have very deep roots in their background and education which make them see the dictates of Western society as more important than the basic needs and aspirations of our

own people. Hierarchical trends in administration of medical colleges, non-democratic spirit in curriculum planning and authoritarian methods in bringing about changes in medical colleges have prevented serious and meaningful change in the inherited structures.

Pseudo-socialism

The political leadership and the leaders of the medical profession have found it important in the interest of the elite and privileged sections of the community, whom they represent to cry out from the social objectives of medical education in keeping with the democratic and socialistic spirit of our constitution. However, in actual practice they have built up hospital structure mainly in urban areas with highly sophisticated technology which serve their own class. All this has been done through heavy subsidy by the government in the name of the people. This pseudo-socialism is seen best in situations like:

- i) months of profession, public and government debate had to take place before the CHW scheme was introduced while high powered technology like cat-scan and linear accelerators are sanctioned in minutes during cabinet meetings for our elite institutions which in their own reports accept that they do not cater to the masses;
- ii) the drug budgets of the PHCs which cater to the masses in the villages;
- iii) the indecision regarding the mushrooming capitation fee medical colleges;
- iv) the hesitation in taking action on the drug policy recommendations of the Hathi Committee and so on.

The Medical Council and the medical profession have shown the same trends since the decision-makers among them have been less personal experience of the social realities of rural India.

Dilution of Standards

The phenomenal growth of medical colleges in the post-independence period has led to a gross dilution of standards in education. In addition there has been what Banerji (1977) has called a culture of

'glorification of mediocrity'. In the absence of adequate number of well qualified teachers, all and sundry have been promoted to positions of leadership and important academic levels. These people not only lack the vision or the academic maturity but have tended to form 'mutual admiration societies' around them to pad up their own complexes and limitations. Even though the Medical Council has laid minimum standards for medical colleges including the qualification and experiences of teachers it is a well-known fact that these standards have been followed in default rather than in acceptance. It would not be rash to state that if an objective evaluation were to be made of the 120-odd medical colleges using the so-called minimum requirements of the MCI more than 50 per cent of the colleges would have to be closed down immediately.

Non-teachers

Because of the professional vested interests in medicine, the medical profession has refused to accept the fact that all doctors cannot necessarily be good teachers. Educational science and pedagogy are important foundations on which medical curriculum should be organised, whatever the content and relevance of the course. Teachers in medical colleges in India seldom join because of a love for the 'vocation of teaching'. A base in the medical college is helpful in the cut-throat competition of private practice apart from being itself a channel of referral to one's own private clinics. This is in spite of the fact that MCI recommends full-time non-practicing teachers. The remuneration offered to medical teachers further compounds this problem. It is only as late as 1977 MCI has stated the need for teachers to undergo course in pedagogy. However, even now this is not mandatory.

What is worse is that all the recommendations for community and rural orientation have never included the single most relevant one for change, i.e., reorientation of the medical college faculty. When all of them have little knowledge sensitivity or skill to work with people in the community, how is it ever possible to bring about a social orientation in the environment of medical colleges?

Schizophrenia in Educational Objectives

The Todd report in UK commenting on under-graduating medical education clearly pointed out that 'every doctor who wishes to exercise a substantial measure of independent clinical judgment will be required to have a substantial post-graduate professional training and the aim of the undergraduate course should be to produce not a finished doctor, but a broadly educated man who can become a doctor by further training'. While continuing the same curriculum that Todd comments on the Medical Council of India and the Government of India expect that the graduate in India will be capable of independent decision making and effective health team functioning necessary in community health practice!

This schizophrenic trend is objective spills over to the curriculum as well. There is a constant pressure within the profession to keep up with the latest and introduce it into the educational process. At the same time in response to all the rhetoric there is a pressure to make the course more socially relevant. Nuclear medicine is added along with rural sociology, concepts of molecular biology added along with health management principles and so on. This is primarily due to the fact that the medical profession all belong to the upper elite sections of Indian society. While seeing the need to appear relevant and radical, the options of going abroad and working in situations for which one is better trained are always kept open!

Myths of PSM

In the Bhore Committee Report, Dr. Grant and other stalwarts had visualised the department of PSM as initiating primarily:

- i) an extension link for medical college hospitals with the communities rural urban around them!
- ii) an association with clinical teachers to stimulate them to see the importance of socio-economic, cultural and ecological factors in management of health and diseases.

Preventing and Social Medicine was to be a process of re-orienting the existing faculty and the inherited curriculum and not just another specially or para-clinical subject.

The history of the evolving PSM department has been very different and there is no doubt today that there is a gross confusion between means and ends. On the one hand PSM departments have literally no contact with hospital teaching or service and on the other hand the rural and urban field practice areas under their supervision are so severely under their own management, with next to nil participation by faculty of the hospital departments that today PSM curriculum is becoming the producer of many myths. The commonest being:

Myth I - that there are two specialities - clinical medicine and rural community medicine. The latter being a diluted substandard type of the former.

Myth II- community medicines/PSM is poor quality medicine dished out by disgruntled and disinterested staff in and adhoc fashion to an equally dis-organised and divided community.

Myth III- Community Medicine, rural reorientation and reorientation of medical education is the thankless responsibility of the PSM faculty while other departments will continue to teach borrowed, inappropriate western medicine.

These myths created by the PSM departments as they exist today need to be squarely confronted with the following maxims:

- i) There is only relevant, medicine and that is 'medicine' with a PSM orientation.
- ii) Community medicine is the best quality of care within the available resources or local constraints (especially economic) rendered in an organised manner, sensitive to the people's needs and based on scientific principles.
- iii) Re-orientation of Medical education towards social/rural/community relevance is the responsibility of every member of the medical college faculty.

A serious movement in the direction is necessary to prevent PSM departments from becoming even more counter-productive than they already are.

Nil Evaluation/Experimentation.

In spite of clear exhortations from time-to-time in all the expert committee documents that experimentation in curriculum within the overall context of the social objectives of medical education must be encouraged and fully supported (in order to evolve our own relevant Indian curriculum) it is a sad fact that this has not taken place. Volumes of papers in conference have been read but real hardcore planned and evaluated experimentation in medical curriculum has not taken place in the country. The Jamnagar experiment and the Kottayam experiment are the only two real attempts and even these have neither been well recorded or circulated to the teaching medical profession for debate, consideration or emulation. The Indian Journal of Medical Education is full of ideas within the constraints of the existing curriculum—family health advisory service, clinico social case conference, students/staff health service, rural orientation camps and so—but all these have been adhoc unevaluated intervention within the existing curriculum mostly by PSM faculty. With the ethos of medical colleges being what they are today, any hope that any of these would bring about attitudinal changes in the students was unrealistic.

It is also unfortunate that the MCI in 1981 has glibly stated that 'no scientific evaluation of what has been in vogue for more than two decades has been undertaken nor a study made of medical graduate from different colleges in the country'. It further adds that 'deficiencies which exist at present are attributable more to a failure of implementation of the council's recommendations and the absence of a system of continuous monitoring and not due to defects in the course and curriculum prescribed. Surprisingly in spite of this statement and in spite of all the rhetoric neither MCI nor ICMR has yet planned an evaluation or encouraged experimentation!

Stress on Problem/Content Not on Process

Change can take place only when the change agents are sensitive to process, i.e., sensitive to an evolving scheme of things dependent on underlying socio-political economic, cultural, technical factors. All the expert committees since 1946 have outlined the problems and then recommended curricular changes—never mentioning process of change i.e., How to get to where we want to get from where we are? Who will do it? How will those who have to do it themselves get the require experience or skill? This explains why there is a knowledge explosion in the curriculum but no change in attitudes, vision or relevance in the career aims of medicals today.

IV. Conclusion

A hundred and fifty years have passed since the present Western oriented system of medical education was established in India. The first century saw the establishment of the educational system transplanted in toto from the British and European situation.

With resurgent nationalism, the next forty years (both pre and post-Independence) saw lip-service paid to the reorientation of education to make it relevant to the people's need. The last ten years has been a new spirit of introspection which at least accept that medical education has failed the people but still lacks the political will to take any radical action.

However, behind the continuing rhetoric, it must be emphasised that in the last decade there have been in government and other expert committee documents some critical analysis and recommendations for curricular change of far-reaching importance. Medico-friends and others seriously concerned with issues in medical education would find these of some support to their own search.

APPENDIX

Recommendations on Medical Education by various committee appointed by the government.

Recommendations of bhore committee (1946) for the evaluation of 'Basic Doctor'.

1. Emphasis on under-graduate teaching of principles and methods which would enable a student to learn for himself, think, observe and draw conclusions.
2. The student must be made to realise that throughout his career general science and medicine have many points of contact and are both continually progressing.
3. This principle (2) will be exemplified by clinical teaching in pre-clinical periods and extension of pre-clinical teaching in clinical area.
4. Teaching of Anatomy/Physiology: the number of didactic lectures to be radically curtailed and lecture demonstrations be increased.
5. Staff-student ratio in pre-clinical subjects 1:15. Mechanical equipments e.g., microscopes etc. should be adequate.
6. Courses of elementary psychology and elementary pharmacology should be introduced during the latter half of pre-clinical studies.
7. At the beginning of clinical period short courses in:
 - i. methods of clinical diagnosis.
 - ii. laboratory techniques;
 - iii. elements of nursing;
 - iv. elements of dietetics;
 - v. introduction to social medicine.
8. In clinical subjects, there should be an attempt at integration not compartmentalisation.
9. Number of beds per clinical unit: 40: 8-10 students/unit
 Junior teachers 1:8 students.
 Senior teachers 1:10 students.

10. Teaching of pathology should include microbiology and parasitology: More emphasis on post-mortems.
11. Department of PSM in every teaching institution. Teaching of preventive aspect of medicine should be stressed in every subject during clinical course. Necessity of hospital social service.
12. No stereotyped curriculum for whole country. Minimum standards to be laid down. Experimentation/reforms and improvements to be allowed.
13. Internship: After final qualifying examination at the end of the fourth year the student should have one year's internship during which he should work under supervision and not be given full rights of a practitioner. Exact manner of spending the year left to the authorities but at least 3 months to be spent in a public health unit.
14. Research should be stressed throughout the course and whole-time teachers should themselves be engaged in research.

(2) reorienting of Medical Education for community health services (from Medical Education Committee Report 1970.).

Recommendations:

1. Definition of 'Basic Doctor':
2. Measures to encourage doctors to go to villages:
 - i. provision of adequate living and working accommodation in villages with modern sanitary facilities.
 - ii. supply of vehicles to PHC;
 - iii. prescription of minimum service in rural areas before crossing efficiency bar or granting of promotions.
 - iv. opportunities for refresher and advanced training in India and abroad.
 - v. professional contacts through visits of specialists to such centres.
3. No revival of licentiate or diploma courses.
4. Entrance qualifications:
 - i. 13 years prior education before MBBS course.

MEDICAL EDUCATION RE-EXAMINED

- ii. Premedical course should comprise physics, chemistry, biology, basic mathematics in relation to physics, languages and social sciences. At least 2 years.
5. Admission requirements: Universities in a state should evolve a common and uniform qualifying examination for entry into medical colleges.
6. A study to suggest a balanced supply of basic doctors and specialists within the limitations of finances to meet our needs.
7. Duration and curriculum of MBBS course.
 - a) 4 1/2 years - 18 months preclinical and 36 months paraclinical and clinical instruction to be followed by compulsory internship for one year with at least 3 months in rural surroundings.
 - b) Improve quality of teaching by using suggested curriculum, methods of assessments and examination, encouragement of research and teaching methods.
 - c) Emphasise teaching of health promotion, growth and development, nutrition, immunisation, health education, family planning, school health services, routine check ups and environmental sanitation.
 - d) PSM should form an integral part of MBBS and marks obtained in this discipline ranked equal to those of other disciplines for the award of MBBS degree.
 - e) General practitioners of experience and standing should be associated with education/training of undergraduates.
8. Methods of Teaching:
Reduce didactic lectures and encourage seminars, group discussions and clinico-pathological conferences.
9. Examination.
25 per cent of total marks allocated for university examination should be earmarked for internal assessment.
10. More mobile training cum service units (Chittaranjan mobile hospitals) to be attached to medical colleges. Senior teachers to provide service facilities in respective rural field practice areas.

150 YEARS OF MEDICAL EDUCATION

11. Medium of instruction: English to continue.
 12. National integration:
5-10 per cent of seats in medical colleges to be reserved for candidates from other states.
 13. Reservation:
Continue practice of 5% reservation of SC/ST candidates. Allot 5% reservation for candidates who undertake to serve in rural areas.
 14. Participation of Medical Profession:
Need for the entire medical profession (professors, elders and leaders especially) to undergo corresponding transformation in concern for health care in rural areas.
- (3) Report of the group on Medical Education and Support Manpower (Srivastava Committee 1975).**
- Recommendations:**
1. To stop the increase in medical colleges and admissions
 2. To generate a manpower policy along scientific lines on a national basis.
 3. To evolve a national system of medicine by integrating modern and indigenous systems of medicine.
 4. To establish a medical and health education commission to implement needed reforms.
 5. Medical curriculum should be reoriented as follows:
 - a) Frame work of natural sciences, humanities and social sciences in premedical education.
 - b) Community medicine; joint endeavour of the whole faculty and not only PSM.
 - c) Rural and urban field practice areas with active health service programmes.
 - d) Principles of educational sciences to be used in the curriculum, particularly self-learning and small group techniques.

- e) Appropriate preparation of teachers and production of effective teaching/learning materials.
- f) Reform of hospitals attached to medical colleges.
- g) Reducing duration of the course by 6 months to a year.
- h) Training of interns in district/subdivision/Taluka/Tehsil hospitals and not in the teaching hospitals.
- i) Continuing education of all doctors after graduation as a joint activity of medical colleges, the professional associations and the health services.

(4) Health for all - an alternative strategy (1981)

Recommendations on Medical Education

1. Greater emphasis on cultural/social aspects of medical action/purposes.
2. No need to over-emphasise high technology.
3. Continuous effort to evolve simpler technologies.
4. Training on social/cultural/economic profile of people.
5. Large base of primary health care.
6. Regional health care:
 - Preventive/promotive/curative problems/solutions identified at each level.
 - skill/facilities at each level.
7. Personnel -specific training.
 - over-education is counter productive.
8. Man and environment to be presented as a biocultural science. Interdisciplinary holistic approach.
9. More practical curriculum:
 - Morbid anatomy
 - surgery.
 - rare disease.
10. Skill development

- surgical/orthopaedic
- anaesthetic.
- 11. Health team concept
- 12. Sociology
 - Human behaviour
 - Social/Political structure of society.
- 13. Practical field oriented training in
 - epidemiology;
 - health education.
- 14. Management of health services.
 - cost effectiveness
 - logistics
 - personnel management
 - methods of purchase and accounting
 - medical audit
 - basic knowledge of vehicles.
- 15. Empathy with people.
 - i) Selection of people closer to poor and underprivileged groups.
 - ii) A non-alienating training process.
- 16. District health care
- 17. Remuneration of doctors.
- 18. Reduction of over-emphasis on post-graduates.
- 19. Continuous education.
 - i. Courses;
 - ii. In-service training;
 - iii. library facilities;
 - iv. Dissemination of information through circular/newsletter
- 20. National orientation.
 - a. Ashram concept of life.

- b. non-consumerist approach
- c. community/individual responsibility in health care
- d. Yoga.
- e. Herbal medicines.
- f. Ayurveda.

PREREQUISITES OF TRAINING "THE BASIC DOCTOR" : A CRITIQUE

Dhruv Mankad

The Medical Education Committee (1969), appointed by the Government of India, observed that medical education should be need based and oriented to produce a basic doctor. The Committee defines, "A basic doctor is one who is well conversant with the day-to-day health problems of the rural and urban communities and who is able to play an effective role in curative, preventive and promotive aspects of the regional and national health problems." By no stretch of imagination can it be claimed that the product of existing medical education has come anywhere near to even this vague definition. Today, at the end of his/her training s/he aspires to go for post-graduation or to go abroad to a more "civilised" culture. S/he feels

more comfortable in the alienated and alienating culture of a large hospital among rare, 'interesting cases'; unable to diagnose clinically common cases but making 'spot diagnosis' of syndromes with unpronounceable names, unable to see the patterns of health problems in a particular community, but asking for the smallest diagnostic test for an untreatable condition.

Who is at fault? The student or the education system? or both? Both, probably, but the responsibility of this sorry state of affairs rests solely on the system of medical education for not recognising the fact that it takes more to training a basic doctor than rural medical colleges, sophisticated competitive tests, large departments of PSM and six months internship at PHCs. Even when the need for change is recognised, what is ultimately affected is a single coat of thin whitewash.

If education is considered to be a process of imparting to an individual training necessary to fulfil a specific social role, then any change in the system of education necessarily presumes a changed social role and social set-up. This premise is forgotten and this leads to an idealised process of education which has time and again proved disastrous. Conscious realisation of this premise is missing from the existing system and thus, any change made leads to a result directly opposite to the professed objectives. This has been the experience of several experiments carried out in the name of producing alternate rural and community-oriented doctors.

The existing systems and the alternatives tried out so far have ignored the fact that the social role which the basic doctor is to fulfil presupposes a value system radically different from that of the existing profit-making and elitist medical profession. Factors other than form and content of the curriculum, location of the college...etc., have a determining influence upon the trainee-doctor's values and attitudes.

Thus, while considering any changes in the system of medical education the following crucial questions must be settled before changing the curriculum:

- 1) What will be the social milieu of the area and the place where the basic doctor (Primary Health Care Planner as s/he should be more appropriately called) would subsequently work?
- 2) What would be his/her exact role and what are the objectives of his/her education?
- 3) What should be the criteria of selection of the students?
- 4) What should be the nature of the training set-up and the orientation of resource personnel?

Let us now see how the present system is at fault in case of these prerequisites and what is the alternative to it.

Social Context

Majority of medical students have flocked to the medical colleges because today the medical profession is a prosperous one. However, many medical students at the time of graduation may have a correct attitude towards health care: preventive and community-orientation, understanding of common-illnesses, the human aspects, but his/her entry into the centralized, curative and individual oriented hospital system slowly rubs off his/her right orientation and makes him/her into what s/he has become to-day.

On the other hand a perfect alternate curriculum may produce an excellent basic doctor but s/he will soon become frustrated and cynical if not given a working environment where s/he is able to fruitfully apply the skills acquired. In that case, s/he would have been trained for a non-existent, alternate social set-up.

On both these counts, the existing system as well as the previous attempts to change it have failed. There has not been any fundamental change in the existing PHC set-up where the basic-doctor is expected to work. It still works basically as a rural dispensary-cum-government health-office. It still remains hierarchical with the medical officer as the 'boss' and the auxiliaries as his subordinates. The PHC too, in turn, is subordinated to the District Health Office, blindly carrying out its orders, leaving little initiative in the hands of the medical officer, of planning for interventions in any community health problem.

Thus the only activity initiated at the PHC level is curative, which is no different from any private or public hospital or dispensary. Lack of an opportunity to initiate community oriented activities results in even the most sincere basic doctor becoming indifferent at first and later s/he accepts the existing values of elitism and profiteering that characterise the profession. Moreover, lack of a democratic mode of functioning and an inegalitarian structure at all levels, makes him/her behave in a similar fashion towards people in general.

Secondly, and more importantly, the present medical education considers health problems in isolation from the total socioeconomic and political reality. It claims by implication that the health status of the people can be improved by medical interventions without prior improvement in their socioeconomic status. It has been shown convincingly that in Europe and in India too, the health status of the people has improved subsequent to improvement in their living conditions, and not by medical interventions alone. Even in India, some of the doctors working towards change in the health status of the people were actively associated with the independence movement which was directed towards a fundamental political change. Thus any attempts to place health interventions in isolation from a socioeconomic and political change are bound to be frustrated.

Given this background, it is necessary for the basic doctor to possess an elementary knowledge of the socioeconomic reality of the area and to be associated with forces of democratic and egalitarian changes in the socioeconomic status of the people, in order to be really effective and relevant. Not only is this point neglected at present, but students and doctors are actively discouraged to think about and intervene in these non-medical processes.

Roles and Objectives

Although, the definition of a basic doctor mentioned earlier does include the role of such a doctor, but in very vague terms. The concept of what role in concrete terms such a doctor would play is not at all

clear. In practice though, the training is imparted keeping his/her future role as a specialist or at least, that of a pure clinician.

Given the health needs of the people, the primary role of the basic doctor would be to plan and carry out health interventions for 10,000 people residing in a well-defined area to be executed through a team of doctors, CHVs and paramedics. Failure of defining the role in such clear-cut terms has resulted in failure in setting clear and relevant objectives of the medical education at present. In practice again, the only objective of the existing system seems to provide manpower to the fast expanding business of medicare.

Training of basic doctors with the above role in mind would require to set objectives such that s/he acquires the following skills:

- 1) Understanding the social and political reality of the area in particular and society in general. At present, as pointed out earlier, this aspect is positively discouraged by the whole culture of the medical college and the education system. The doctors remain totally alienated from the concrete lives of the people who they are supposed to care for.
- 2) Arriving at a community diagnosis of health problems. This would require a variety of clinical and non-clinical skills like screening methods, sampling and surveying techniques and statistics. At present the teaching of non-basic clinical facts and skills like identification of fourth heart sound receive priority over teaching of basic non-clinical skills, for example, how to formulate a questionnaire for a health-survey which is essential for arriving at a community diagnosis.
- 3) Training community level workers and paramedics. This would require simple skill in communications-ability to hold seminars and group discussions..etc.
- 4) Planning education programme for public at large on public health problems and other health issues. Presently, this role of doctor as a teacher is entirely neglected even though the CHV- scheme under which the CHVs are trained at the PHC, is around six years old.
- 5) Clinically diagnosing common diseases prevalent in their area with the help minimum investigations and treating them.

6) Managing efficiently a small health centre. Book-keeping, and storekeeping techniques and administrative procedures are some of the skills without which s/he will not be able to carry out the role of a planner.

7) Carrying out simple community based research. At present, it is impressed upon the student during his/her medical training that research is to be carried on only in institutions with sophisticated equipment and/or obscure, highly specialised themes by persons specially trained for the purpose. This results in research remaining irrelevant to the needs of the majority and becomes a monopoly of a privileged few. It also results in the neglect of community health aspects of various health problems.

At the end of the training s/he should have internalised the "multidisciplinary" nature of the health problems and the "collective" nature of their solutions, thus leading to de-emphasising his/her role as a leader at the top rather than as a member of the team. The existing set-up fosters a value system which makes the doctor either a functionary carrying out a 'job' or a 'Godman' bringing about miracle cures in individual patients.

Criteria For Selection

Several years of experiments with selection criteria and procedures have not solved the basic problems with the existing system of medical education: the alienation of the doctors from the people and their irrelevance to the health needs of the majority. On the other hand, the sophisticated competitive tests, selection on the basis of high percentage of marks at the qualifying examinations has reinforced the medicos' belief in their superior status.

All this sophistication in selection procedures overlook certain fundamental issues:

1. Almost all the candidates belong to high castes, upper-middle and middle classes of urban origin, whose values and culture are quite different from those of the majority of our people - the lower and middle castes, working-classes, and people of rural origin, and who are also

looked down upon by the former. When such a person goes to the PHC, s/he is seen either as a distant God or as an alien enemy by the people with the consequence that his/her role as a basic doctor is totally negated. Generally, such students uncritically swallow the explanations doled out for the extreme poverty in the country, such as 'population explosion', 'too much drunkenness', 'no habit of saving'...etc. Thus the social background of the student plays a crucial part in determining his/her attitude towards people and their problems. A person is less likely to imbibe such unsympathetic attitudes uncritically.

2. At present, the minimum education qualification for getting admission to a medical college is completion of two years of junior college. In the circumstance, where only a small percentage of people, mostly male, of higher castes and upper or upper-middle class can afford to enter colleges, keeping such a high educational qualification as a criterion of selection discriminates against women, lower castes and working-classes, who are more likely to possess the right attitude according to the above criteria. Thus, the minimum qualification necessary should be no more than the school-final to ensure a minimum knowledge of basic science and a minimum intellectual discipline.

3. At present, though tests of questionable validity like intelligence tests are carried out, no attempt is made to assess the motivation and attitudes of the candidate, which would later determine his/her ability to fulfil the role of a basic doctor. Although they are difficult to judge, scientific methods to evaluate them can be found out.

With the help of these scientific methods, the community from which s/he comes can decide about the student's attitude.

At present, criteria like intelligence-tests and high educational qualifications have become unchangeable gospel truths, thus denying an otherwise suitable candidate the opportunity to train himself/herself as a basic doctor. The criteria should be considered in total and should be flexible. Any absolutisation of one or the other criterion would defeat the very purpose of training a basic-doctor.

Training Centre

The basic-doctor is supposed to be trained as a part of the complex of primary health centres. Keeping this in view, the present training centres-the medical colleges with large urban-based hospital wards and OPDs, sophisticated diagnostic instruments and treatment facilities are totally out of tune with the culture and conditions of a PHC. A student used to studying in such a place can't and doesn't find his/her bearings in the rural based, poorly equipped, small PHC.

Moreover, the problems seen commonly in the wards of a teaching hospital at present may be quite rare in the community. Thus a distorted answer and wrong health profile is presented to the trainee.

Also, the centralised set-up of medical training discourages the students to look for other avenues of obtaining knowledge. In the field, when faced with a difficult problem, s/he feels lost without the support of the medical college, being unable to turn to other sources.

Lastly, one of the major drawbacks of the existing training setup is that despite large PSM departments, because of the very nature of the set-up, the community health aspect of a health problem is a never emphasised. Community health is taught as a separate subject, but does not form an integral part of the teaching of medicine, surgery, paediatrics...etc.

If the basic doctor is to be really relevant to the actual health problems of the community, the training place should be a community health project attached to a referral centre not larger than a district hospital. A large part of the training should be imparted at the actual field levels i.e. at the level of PHC and sub-centres so that the trainee is able to study the problem in its total context as it exists in the community. At all the levels the problems must be taught with the community health aspect receiving importance.

Selection Of Teachers

In the existing medical education system what is true for the selection of students is also true for the selection of the teachers. Many of the teachers are excellent clinicians (or even bad ones but primarily

clinicians, never the less) individual and disease oriented, not community and patient oriented. Their value systems, motivations and attitudes are never considered while appointing him/her as a teacher. His/her ability at community diagnosis nor his/her teaching skills are criteria for his/her selection. In which case, what better can one expect from the existing medical colleges other than to turn out private practice and/or specialisation oriented, misanthropes?

With all these disqualifications, the teacher remains above evaluation and criticism by the students, thus missing an excellent opportunity of self-improvement and imparting to the students a sense of humility.

In summary, the existing medical education starts with unmotivated students, elitist clinicians in a big hospital setting, and without a clear objective of what type of doctor is to be created. A wrong start leads to a wrong result. Unless these basic faults related to the prerequisites of medical education are remedied no amount of changes in other aspects of medical-education would bring the desired result.

Medical graduates in developing countries are usually trained in institutions which have been modelled on those in the developed world. They use developed country textbooks and take developed country exams. The doctors that emerge are fitted to practice urban medicine with immediate access to a large hospital. Such medicine is largely irrelevant to the health problems of the rural populations and to those living in urban slums.

— Earthscan, 1978.

CRITIQUE OF THE EXISTING METHODOLOGY FOR TRAINING OF MEDICAL STUDENTS

K.J. Nanavati and N.C. Pandya

Methodology puts concepts into practice. Both the concepts and methodology should be sound as they are closely inter-related.

Guidelines about the methodology to be adopted in medical teaching are provided in the recommendations of the Medical Council of India and the curricula of the University. But there are several problems. One, they are of a general nature. Secondly, they are not shown to all the teachers nor the teachers care to see them. Systematic discussions on and periodic review of methodology in medical colleges is hardly done.

The decisions and plans about methodology of training formulated at the top level by politicians and administrators are ultimately implemented by the teachers. The prevailing socio-cultural conditions of top-down decision making and the undemocratic value system in the society prevent newer developments of methodology of training.

An attempt is made in this paper to outline our critical observations after reviewing the existing methodology of training and the consequent value system.

1. Lack of proper direction of development and a communication gap between administration and teachers: There is no formal or informal training programme for teachers in medical colleges. Nor are teaching abilities evaluated at undergraduate or post-graduate examinations. Last two years of post-graduate training in the present residency programme are considered as teaching experience for post-graduates. Either they don't teach during this period, or if they do, they are not supervised.

In the absence of any definite orientation the teacher teaches in his/her own way. This would depend on his/her own creative thinking, ability and will to communicate, his/her own experience of learning from the seniors, the departmental traditions where he/she is teaching, motivation with which he/she becomes a teacher etc.

Teaching in medical institutes assumes the form of something like idioventricular rhythm! All good doctors are not good teachers and all good teachers are not good doctors!

2. A Lack of Stimulation in Teaching Programmes: These include traditional didactic lectures with or without notes, audio-visual shows, practicals, case demonstrations, seminars with or without students' active participation etc. Merits and demerits of each of the methods is beyond the scope of this paper. On the whole, irrespective of the method, it is our experience that we are breeding mediocrity, inhibit creative thinking, fail to show the vastness and complexities of the subject of medicine and perpetuate the tyrannic role of memory in all these training programmes which become monotonous and superfluous over a period of time. Deeper understanding of the subject and

its relevance to our country's health problems and socio-economic situations are hardly emphasised (though the curriculum does).

3. Overlapping of examination and pre-examination time (during which the students generally don't attend clinical terms and theory classes of medicine, surgery and gynaecology and obstetrics), of IInd MBBS with clinical terms of clinical subjects is a regular feature in many universities. Hence the training remains very poor specially if the clinical terms at this particular time belong to subjects like paediatrics, skin and V.D., psychiatry, etc., for which the period of posting is as short as 15 days to one month in the whole span of three years of clinical teaching.

4. Disharmony in teaching of various subjects: Each department of teaching hospitals has become a separate compartment at least in the matters of teaching. Continuity in the study of the subject is not maintained. In the morning the students attend a clinical term, then s/he attends theory lectures on a different subject and performs practicals in the afternoon on a different topic.

Attempts of integrated teaching (anatomy, physiology, pathology, medicine, surgery and pharmacology of a given disease being taught simultaneously in a single session) are very primitive.

A programme under the name of integrated teaching was started in the early sixties in a few medical colleges of Gujarat. Awareness about the importance of integrating community medicine teaching also brought about inclusion of a community medicine teacher in the programme. But in these programmes also each specialist discusses the topic in his/her own rigid stereotyped framework and the disease or the patients with the disease are not seen within the total perspective. For example, the clinical teacher himself/herself has no orientation or connection with the utility of community medicine! Hence, there is no real integration in teaching or in learning.

Secondly, there are many clinical topics discussed in the subjects of anatomy and physiology. These are taught in the form of theory lectures by teachers and are crammed by students without proper understanding. This teaching is ineffective and it consumes a lot of time and energy since the same topics have to be taught again when the

students come to the clinical side. Even pathology and pharmacology are taught in the same way in spite of the fact that the students are really on the clinical side at that time. Such a situation calls for an integrated teaching system.

5. Hospital based teaching: Most of the clinical and paraclinical teaching is in the hospitals and on the indoor cases which are not so common in general practice. From amongst these indoor patients, the teacher is proud of and prefers to select the patients with less common ailments like hemiplegia, paraplegias, cardiac murmurs, huge splenomegaly, jaundice etc., rather than patients with enteric fever, malaria, viral hepatitis, chronic bronchitis etc., which are also available in the teaching hospital wards (thanks to the poor development of the referral system and PHCs)!

Even after selecting uncommon problems, there is a temptation to emphasise (and create a halo around us) the rare aspects of that problem which may not have a significant relation to either the practice or to the broad understanding of the subject. For example (continuing the afore-mentioned selection of cases), we the medical teachers discuss more of the various syndromes with foreign names (no grudge against 'foreign' please!), refined procedures of angiography, scanning, cardiac catheterisation, echocardiography, (E.C.G. is getting 'old'), leukaemia, latest haematologic technique, haemolytic jaundice etc., on these cases as compared to the discussion on immediate and long term care of hemiplegias and paraplegias, cheaper and effective treatment of sore throat to prevent rheumatic fever and consequent valvular lesions, abuse of drugs in all of these cases, viral hepatitis etc., which could very well be discussed on the same cases.

Outdoor departments in teaching hospitals provide more opportunities to teach commoner problems; but the teaching in the outdoors is neglected in most of the teaching hospitals. Even if some teaching time is available, it is spent on teaching the indoor group of cases attending the outdoors! A different dimension of teaching medicine in outdoor is neither appreciated nor exploited by medical teachers.

Some attempts are being made to reduce the hospital based teaching and to begin community based teaching. This is only a physical change! Essentially it continues to be a hospital based -and biased- teaching being taught, if at all, in a rural or a slum set up. We only take minjature teaching hospitals to the community. There is no community orientation in these programmes in terms of the hours of visit, types of doctors manning the programme, commitment of medicos and paramedics, diagnostic and therapeutic approach to the illnesses prevalent etc.. Neither are the students taught the realities in the rural areas nor are they encouraged to find solutions to these problems. The only idea - an erroneous one - they get is, perhaps, that medicine cannot be practiced scientifically among our ignorant and poor crowds!

6. A newer programme or a new subject of teaching is almost always an addition to the already existing teaching programme. For example, Biochemistry, community medicine, paediatrics, ophthalmology are added as new separate subjects with a full question paper at examination over and above the subjects general medicine, general surgery and obstetrics - gynaecology. There have been recommendations to include some aspects of administration, economics etc. New additions, without curtailing unnecessary existing portions of syllabus would become burdensome.

7. Examination oriented approach: Our education system in general trains the students (right from K.G.) for examinations - learning the subject is a by product of that process. By and large what is evaluated is the ability to memorise (or mesmerise?). This trend is reflected in medical education also. Standards and level of examinations are far below the desired ones due to well known reasons; hence, even the examination has ceased to be a motivational factor for good study.

Examination, one of the possible tools of education, has assumed importance of such an immense proportion that some people have started recommending changes in the examination system with a view to initiate reform in medical education. They perhaps fail to realise that the same teachers are going to be the examiners. Reforms in the

examination system without simultaneously changing the orientation of teaching is therefore bound to be ineffective.

8. Assigning responsible work to students: Learning through sharing responsibility is an effective means of education which has not been applied in our methodology of training and therefore, there is no sense of involvement amongst the students. Without this, education has become a passive process.

9. Students are not inspired and encouraged to attend the ward work even during the routine fixed three hours of clinical teaching - not to talk of their involvement or even attendance in ward work beyond these three hours. Utility of ward work or attending emergencies can hardly be over emphasised.

10. Language of instruction has been a great source of heated debates. In medical education, we think, it poses some problem only at the beginning. Superiority of learning in the mother tongue can not be underemphasised. But, the issue is so complex that I would only say that this problem would not be on a high priority on our scale as far as the MBBS course is concerned.

11. Lack of an evaluation system for methodology, absence of clear guidelines about methodology, poor dialogue between administrators and teachers, teachers and teachers, teachers and students, health services and medical education departments as well as the service conditions (promotions, transfers, facilities of accommodation and transport) of teachers are also important factors having a significant bearing on the methodology of training in medical education.

Having reviewed the salient features of the methodology of training, we would like to point out the value systems generated by (or is it just the reverse) the existing methodology.

1) Technical social hierarchies -

a) It starts with a super specialist, the general specialist, general practitioner (MBBS, of course !), paramedics and then the poor patient ! Practitioners of other pathies are all "quacks"!

b) There is another informal hierarchy in medical colleges also viz. clinical teachers, pre and paraclinical teachers and then the teachers of community medicine.

c) Formal hierarchy of the institutional set up is obviously there. There are many sub-divisions of each of these categories. In every hierarchy each one looks down or has a grudge towards the other and students learn this and perpetuate this. The subjects are given importance by the students according to these patterns of hierarchy.

2) Dichotomous thinking about "theory" and "practical" has grown to enormous and equally erroneous proportions. Lack of knowledge has come to be identified (and dignified) as "practical". It is often heard, "He is a good clinician though he is poor in theory". One knows what it means! How can one be sound in theory without being sound in practical or vice-versa ? But this dichotomous thinking has reached a dangerous level diverting the students from acquiring proper knowledge and skills.

3) Attitude of discouraging "bookworms" (students who might be studying regularly and sincerely) by passing adverse comments and remarks and that of taking pride in passing the examinations with eleventh hour preparations.

4) Competition for entry into medical career is so fierce that the students struggle very hard for scoring good marks and undergo a lot of tension. Hence, admission in a medical college has become the goal in itself - once you are in, you are going to become a doctor! This may be one of the reasons for the slackness observed amongst the students.

5) Our system of education as a whole tends to inhibit creativity and originality. It inculcates an attitude of studying only under the compulsion of examinations and that of forgetting the subject after passing the examination. The same attitudes, more devastatingly the latter, continues even after joining a technical course like medicine.

6) No systematic knowledge is given about the health care delivery systems or institutes. On the contrary remarks are constantly made, comparing the system or institutes in our country to those in the developed countries. No attempt is made to discuss the differences in

the socio-economic and cultural constraints under which our system works. As a result, there is a feeling that due to inadequacies in the technology available in the country we can't practice "ideal" medicine. And this acts as a justification for practicing and promoting unscientific medicine!

7) Values of industrialisation and urbanisation have not stayed away from the field of medicine. Flair for a refined and soft life, superiority of "intellectual" work over "physical" work overdependence on technology, individual freedom and growth without due consideration of others, super specialisation isolating one from general affairs are some of the symbolic expressions of the rapidly growing process of industrialisation.

To conclude, there are many loopholes in the existing methodology of training including the value system that it breeds in the culture of medical schools. Proper training of the teachers (like B.Ed.), and restructuring of various departments are the measures urgently needed in order to bring about a meaningful integrated, need oriented teaching with creation of the same doctor as an objective. Further, introduction of periodic evaluation and review of syllabus and methodology, continuing education of the teachers etc., would help in filling up the loopholes in the existing mode of teaching. Experiments in educational methods, like joint training of paramedics and medical students, general preventive and curative clinics etc.) must precede any large scale changes in the methodology if they are to be relevant and long lasting.

TEACHING OF COMMUNITY MEDICINE A Critique And A Few Suggestions

Anil Patel and Ashvin Patel

One of the criticisms mfc faces is that it is always criticising and there have not been enough constructive suggestions. Hopefully the 10th annual meet of mfc at Calcutta will help correct this impression.

A Clarification on Use of Terms

At the very beginning we would like to clarify that the terms 'community health' and 'community medicine' have been rather loosely used in the sense that they are both interchangeable. They both may have different shades of meaning in different contexts, but for our argument, we would like to skirt the whole debate on the precise defini-

tion of the terms 'community health' vs. 'community medicine' simply because they serve no purpose other than diverting the attention from much more crucial and difficult problems.

What is Community Health? : A Problem and Its Scope

A friend, final year medical student, fine fellow, sensitive, intelligent, concerned, and eager to know about the wrongs in existing health system once asked "but what is community health? how does one 'practice' it? I can understand and make clinical diagnosis but how can I make 'community diagnosis' or how can I 'do' community - treatment?"

This note keeps these and similar questions and similar medicos in mind whose concern for social ills is beyond question, who are not self-seekers or purely career-oriented. They are not blind to problems of neglected, exploited unorganised poor people. These questions have to do with teaching of community medicine in the medical colleges in our country today. Before we go further we must stress one point that it is not and can not be a thorough-going, fully-developed argument. The teaching of community health is too vast and complicated a problem to be dealt with full justice by a small group like us with a limited experience in community health.

Hold of Traditional Medical Education on Its Critics

We start with the very choice in this meet of teaching of community medicine as one of the subjects in medical education. This is a mistake in our opinion and reflects the strong hold the orthodox and traditional mode of teaching health sciences still has on our minds despite our vast valiant efforts to throw away the hidden assumptions and theories of teaching health sciences in traditional ways.

Another aspect of the same phenomenon of the hold of traditional mode of medical education on our minds is to be seen in the fairly widespread belief even amongst the critics of medical education that a number of progressive changes have been made in the series of recommendations made by various high level committees on medical

education since independence. The critics feel that atleast part of the problem can be solved by implementing the progressive changes honestly and sincerely. We believe that far from being progressive, they are merely cosmetic changes. They do not provide for any progress in medical education.

In the traditional way of teaching, the science of health has been broken down into a series of rigid pigeon-holes (e.g. anatomy, physiology, pathology, medicine, surgery, obstetrics and gynaecology, community medicineetc.) precluding almost any interaction among them. The organic unity of all disciplines in the context of their application in practice is disrupted mindlessly for all practical purposes.

A sort of divisions of disciplines is necessary on practical grounds only, but when community medicine is included as one among many subjects to be learnt, the situation begins to approach absurdity. A couple of years ago a well-known community health worker in India made a very significant observation, that creation of Departments of Preventive and Social Medicine and subsequent separation of subject of PSM in the medical colleges (progressive change) had dealt a severe blow to the development of the concept of teaching and practice of community medicine. Now since the departments of PSM were there, it was their sole responsibility to teach community medicine, other departments could carry on as they liked! The harmful harvests of such thoughtless and shortsighted decisions are being reaped now.

The notion of community medicine as a separate subject has its roots in the way the problem of dealing with ill health has been posed. This particular way of posing a problem generates other assumptions, theories and action programmes which ultimately mould ideas of both supporters and critics of existing medical education! Of course, the interests of various power centres in the society do influence and mould a particular form of medical education; but clearly this is not an adequate explanation, because it still leaves open the interesting problem of explaining criticism of a segment of critics whose alignment with the power structure is unthinkable, voiced within the same framework which is a problematic essentially because it poses the

problem in one way and not in another way. The critics must challenge the way the problem is posed.

Problem Posing (of Ill Health) - The Traditional Way

Traditional medical education largely seeks to equip students to deal with an individual patient who comes to the doctor for help. Virtually the entire medical education starting from anatomy, physiology through pathology and pharmacology to individual clinical subjects is geared towards an individual who perceives illness and seeks help from a doctor at a pre-decided place called dispensary or hospital (here again mostly hospital).

Of course, what can be called basic sciences like physiology, bacteriology, pathology, biochemistry, parasitology, immunology, pharmacology ... etc. in their usual settings outside the world of medical colleges do not operate on such a narrow base and in such a disjointed manner as they do in medical colleges. Their stupendous growth has been possible in the first place because they have successfully blended study on populations with study on individuals. One without the other is, of course, impossible. The pundits of medical education seem to have achieved impossible to wit, sever the individual from his social, physical and biological settings !! Alas ! The interpenetrating reality is no respecter of such arbitrary human divisions! In this framework ill-health is seen in a person in the hospital ward. His body and his blood, heart, liver, lungs, intestines, brain, stool and urine only brought under incredibly deep scrutiny. This narrow focus, unfortunately the only focus, on an individual and his bodily functions keeps out this person as a member of his family, of much larger social groups to which he belongs through kinship, residence, occupation, religion, beliefs ... etc. and his conditions of life, his work, his economic and social placement and culture, his physical and biological environment. The whole education is a gigantic exercise in bedside pathology and therapeutic methods. The disease in a person who presents himself to a doctor in hospital is more often than not a tail end of the entire disease process in an individual. Natural history of the diseases in individuals has no place. Some of the

most common diseases and less lethal diseases like scabies, malaria, mild anaemias, moderate malnutrition and beginning of diseases are hardly ever taught since they are considered 'poor teaching material'. Health and sickness in the population with their possible correlations with significant social and occupational influences are outside its province.

Problem Posing (of Ill Health) - A Community Health Way

Community health far from being a 'subject' is a point of view, a definite way of looking at the problem of dealing with ill health in individuals in their social, biological and physical setting. Community health has at its focus both the individual and his environment. Community health is after all about the health of all individuals in the community and not in an artificial and unrealistic setting called hospital. This way of looking at a problem of ill-health of individuals in society cuts across the largely confused and, therefore, sterile debate on dichotomy like curative vs. preventive medicine. As a logical corollary to this shift of focus a similar shift also occurs in remedial measures to be instituted.

The problem changes - consequences follow

Having thus made a point that community medicine is not to be treated as a separate 'subject' — a grave mistake made in traditional medical education because of the narrow (and unreal) way of looking at the problem of ill health in individuals - to be taught but should form an overall framework within which the problem of ill-health in individuals is to be posed and examined. We should now like to derive a broad principle from it: the principles and methods appropriate to understanding the disease not only as an end point of pathological processes in an individual who seeks on his own medical help but also, indeed mainly, as a disease process which gains an entry into the community, spreads its tentacles, consolidates and entrenches itself in different individuals in different forms and intensities, in different social groups, in different environments (used in a wider sense as used above), in the community must permeate through all subjects - basic

sciences and so-called clinical subjects. At this stage, we would like to touch yet another controversy in the current debate on medical education: whether the basic sciences should be taught at all? If yes, what; how much; and at what stage? In our opinion it would be nothing less than a monumental blunder to do away with the teaching of basic sciences. We also express our deep reservations about the tendencies to suggest deep and extensive cuts in the basic sciences on very superficial grounds of their supposedly limited utility in actual practice. Community health must remain rigorously scientific. The deep insight they have developed in the life processes are vital for the development and growth of community health. Although we are proposing that basic sciences must be taught within the framework of community health, we hasten to add that we do not know enough to suggest the precise manner in which this can be achieved. Ours is an attempt to establish a proximate principle; the detailed working-out will call for much larger efforts by people of various skills, experiences and background.

Another major consequence that follows from our main thesis that ill health of man in society and not ill health of man in the hospital ward should be the focus of medical education, is what are the health problems medical education should be focusing on?

This point is of crucial importance if the foregoing argument is to retain its validity and sharpness. Indeed, without the unambiguous answers to these questions, the thesis we have proposed can be twisted to serve more or less the current model of medical education. Disingenuous interpretations may be attached to it to mean: whosoever comes in the hospital his/her social setting will be taken into account, succeeding thereby in retaining more or less intact the present model of medical education. Paler versions of such 'society-oriented' teaching programmes (progressive?) are to be seen in today's family visits or integrated clinics (a teaching session in the wards jointly conducted by a staff member each from clinical medicine and PSM). A selection of a case in this exercise is a function in the first place of selection of patients for admission which has little relation to the health problems prevalent in society.

To avoid such deceptions, we should say a little more precisely, it is not 'man in society' in the hospital who moves under the focus of medical education rather the focus of medical education now moves out of the hospital to be trained on 'man in society'.

Selection for medical education of health problems in society should naturally depend on society's experience of most common and significant disorders which cause most mortalities, suffering and disabilities. Selection of such problems not always easy- even if we ignore the pulls and pushes exerted by the powerful in society. Some give and take is always inevitable. Even so what goes on in today's medical education is so out of place, so other worldly (we mean the worlds of the rich and powerful in the cities of India, USA & UK), so unrelated to India's major health problems that it cannot be criticised enough. The actual regulative principle which guides the design of curriculum is completely at variance with this regulative principle to which most of those who are somebody in medical education pay a lip service only.

Let us try to take a stock of the health situation in India and see how medical education measures up to serve it.

Mortality is heavily concentrated in young age groups. 45 to 50% of total mortality occurs in children below 5 years of age who constitute 15 to 18% of the total population. Of these deaths more than 90% are preventable, and should be prevented eventually. In any developed country children below 5 years contribute less than 1% of the total deaths. Comparatively a high proportion of death rate is found to be concentrated in the elderly population (more than 65 years). What is more, very little can be done to prevent these deaths, or to prolong life very substantially.

Deaths associated with pregnancy in our country are at least 20 to 30 times more than in well-developed countries. Again as large as 95% of these deaths can be prevented by intelligent human intervention.

Why these preventable deaths occur ?

The most important causes of infant deaths (deaths below 1 year) are: (1) complex interplay of Protein-Energy-Malnutrition (PEM) and most common infections like diarrhoea, respiratory infections, and skin infections, and (2) babies born with low birth weight (less than 2.5 kg.) which is substantially a function of material malnutrition (PEM). Deaths in children (1 to 5 year) which are 50 to 60 times more common than in a well-developed country is almost exclusively a function of common infections and PEM.

High maternal mortality is again a function of iron deficiency anaemia (which is almost universal), PEM, infections after delivery and inadequate monitoring and care during pregnancy and labour.

Hundreds of thousands of children lose their vision due to Vitamin A deficiency. Communicable diseases like gastroenteritis, pneumonias, scabies, malaria, T.B., leprosy, measles, and many others continue to play havoc in the community without meeting any significant resistance or fight. The list of the problems can be made much longer than this, but suffice it to say that most mortalities and morbidities are due to either deficiency diseases or infectious diseases or both. Many fair-minded people might think that we are stretching our argument too far. They might argue that many progressive changes have been introduced - more rural orientation, more about common diseases etc.. We would like to assure them again that it is not so.

Several years after smallpox has been eradicated from India, one wonders how many medical students or for that matter members of the teaching staff, except perhaps members from PSM Departments, know the most outstanding elements of strategy and rationale of it which achieved such amazing results. A pretty dangerous disease was conquered (without any active involvement of medical colleges) and we have taken no note of it. The history of malaria eradication is even more instructive. The ambitious grand strategy was based on one of the finest epidemiological models man has developed of infectious diseases. Superb organisational efforts went into it. Fine statistical and epidemiological tools were developed to implement the strategy.

It reached a dizzy height of success and then came tumbling down. Why it achieved what it did? And why did it fail? While this great drama was being played out in the five lakh and seventy five thousand villages, batches after batches of medical students were going through the motion of medical education without much a do about malaria epidemiology and the strategy. And this is not merely a question of teaching malaria. Full 10 years after the elegant model of malaria epidemiology was perfected and the grand strategy to eradicate it was pieced together; the expert committees one after another were recommending 'progressive changes' in medical education to make it more responsive to social needs, taking not so much a note of malaria epidemiology and eradication strategy. As we shall see presently the teaching of sound epidemiology is fundamental to teaching of community health. Malaria epidemiology and use of epidemiological and statistical tools in the eradication strategy could have provided a strong base and an impetus to the robust teaching of community health to medical students, but it seems nothing was further from the minds of these experts than this relationship. The result was loss of a great opportunity on the one hand and adding trivial notions in medical education, on the other hand. Those who are still convinced about 'the progressive changes' should ask one question to themselves: what weight is given to these changes in the examinations both written and oral?

Medical education in U.S. puts Ischemic Disease of Heart (IHD) on a priority list, so does (almost) our own medical education. IHD is the 2nd most prevalent disease in U.S., first being hypertension. IHD is the number one killer in the US. In the US infant mortality is 7 times less than in India. There are not any reliable studies in India to give us reliable prevalence rate of IHD; but it is almost certain that prevalence is bound to be much lower than two percent found in US because of the simple reason that the proportion of adult population at risk in India is so much lower than in the US. Also most of the adult population which lives in the rural areas is too poor, and too hard working to carry the load of risk factors which the US adult population carries. The contribution that IHD could be making to total mor-

ality in India is bound to be infinitesimal. In any well-developed country where infant mortality is approaching 10/1000, in a population of the size of Gujarat there would be less than 10 deaths in infants because of diarrhoea every year; where as in Gujarat where infant mortality is much more than 100/1000 the total number of deaths in infants every year because of diarrhoea is expected to be 60,000 !! (based on B. Nicholas and H. Soriano in *The American Journal of Clinical Nutrition* 30: September 1977). Another false notion which has gone round in recent years and this time mainly from the critics of the health system is that most prevalent diseases in India are simple. If there was a case of more simplification than is possible or necessary this is the one. This injurious belief we suspect is even shared by the medical establishment. The dangers of such beliefs are clear. They may well lead to a kind of smugness and complacency in which it is not considered necessary to understand thoroughly the dynamics of diseases most prevalent in the society. This undertaking can be as trying as - if not more - the one that has to be undertaken to understand the diseases which dominate western medical education as well as ours. This argument is not to be interpreted to mean that the study of degenerative and neoplastic diseases is to be completely removed from the medical curriculum; it is to argue only that sense of proportion is needed. In this connection let us stress again that basic sciences are as basic to understanding our diseases as they are in degenerative and neoplastic diseases. Protagonists of their drastic curtailment must pause and ponder. The ignorance of medical students and teaching staff of medical colleges about the dynamics of infectious diseases and deficiency diseases which cause most of the mortality and morbidity is to be seen to be believed.

It is impossible to defend the current focus of medical education in India rationally. One may, of course, invoke the argument of balance of power in society but it is not a rationale as the word is normally understood.

Instead of meeting this massive challenge of infections and nutritional disorders which kill and maim children and women of poor families in rural and urban areas and sap the energy of working men and women

all over the land and lead to their premature deaths, what we have done is to insert one subject called community medicine to be learnt by and large from one text book of preventive and social medicine (textbook of Preventive and Social Medicine by J.E. Park) in the medical curriculum. This, to say the least, is a mockery of the concept of community medicine.

The Methods and Tools of Community Health

What we have said so far in this note is to state the objectives, the rationale thereof and overall framework in which the problem of ill health in society should be viewed. We have also briefly alluded to values that normally should go with this.

The real question now is: how to transfer these objectives and values into a tangible reality?

The methods and tools by which the objectives as described above are to be realised assume importance and receive the attention they deserve only when they are viewed in such a conceptual framework of values and problems. In absence of such an overall framework, as is the case now, the vitally important methods and tools are tucked away in neat and well-circumscribed chapters of textbooks of preventive and social medicine. These methods and tools are then converted into one of the countless topics to be studied during the whole course of medical education (endless debates go on amongst experts as to at which stage of medical education these 'topics are to be taught!').

Instead of forming the skeleton and sinews of methods and logic upon which is built the knowledge of commonest disorders of body and mind in a society, they are turned into trivial, peripheral, dull, mechanical, bothersome, puny little things to be borne with fortitude until the time of examination. Once this ritual is over they are permanently forgotten and discarded without any sense of loss.

How many times we have seen total incomprehension writ large on the faces of otherwise intelligent, well-established doctors at the mention of words like 'epidemiology', 'demography', 'statistics' ... etc. After a prolonged silence and of rummaging their memories all they

can recall are words they have heard in the distant past and unarticulable, unpleasant associations with them!

Yes! they are the tools and methods of learning and doing community health plus the core theories and elements of social sciences. There are yet others but we will not discuss them here.

Epidemiology is neither a bundle of definitions nor a kit of tools nor is it merely a lifeless scheme of a triangle of an agent, host and environment as it is naively made out to be. It is the method and logic of health sciences rather than a science itself. It is in the framework of epidemiology that one can understand, study and analyse happenings like various health disorders in man and in society. It is with the help of epidemiological concepts and tools of analysis, longitudinal and cross sectional studies, case-control studies and methods and tools borrowed heavily from demography, that we can understand as to why a particular disease gets established in certain age, sex, social groups at a certain place, at a certain time. What keeps it going? When it changes these characteristics and why it does so? And how it relates to other diseases in the society? The understanding of distribution and determinants (causes) of the most important disease complex of a given society provides us clues, pointers and methods to intervene so that their hold on society may lessen progressively until the time when they are eliminated completely or tamed considerably.

Similarly statistics is not to be looked upon as highly abstruse mathematical formulae which are largely irrelevant for our purpose and loaded with jargon. It should be viewed as an invaluable aid to introduce necessary rigour in collection, arrangement, and analysis of observations in human or any living/non-living populations and deriving accurate inferences from them.

It is said about statistics in a negative sense that it can be used to prove anything, therefore not to be relied upon. There is some truth in this charge but fault is not of statistics as a method or a means but of the faulty way it is used. The best and most rational way to fight abuse of such a fine tool as statistics is to understand it ourselves, know its limits and worth. The ever-growing literature of health sciences is full of contending theories, ideas and interpretations. A doctor must be

able to make a reasonable assessment of these competing ideas himself/herself. This is possible only when they have a sound grasp of basic epidemiology and statistics. When this is not so most doctors are reduced to either falling prey to any claim that appears in 'pestigious' journals or to stick to his/her outdated textbooks or to adhere dogmatically to his/her own clinical experiences which is very often a rag-bag of impressions only, or to accept meekly what drug industries tell them through the flood of literature which many a times is dubious, deceptive and dishonest.

Demography as alluded above provides many tools and methods to epidemiology. In the present medical education they have degenerated into another bundle of information to be learnt by rote without any understanding or insight into these concepts. (e.g. life expectation at birth or at one year of age, crude death rates, birth rates, standardisation — direct and indirect, sex-ratio, fertility rates, infant mortality, childhood mortality, life tables ... etc., etc) These are not merely numbers to be memorised because a pedantic or eccentric professor chooses to ask such silly questions in the examination. These statistics, in fact, represent in a distilled form information about changes in the size and structure of the population and the forces which mould them. They help shed light on immensely complex and subtle processes of health and disease in society. For instance a high rate of infant mortality in one society as against the low rate in another society says so much about the possible differences in the two societies which otherwise would not come to our notice and we could not have guessed the role they play in shaping the events. Life expectation at birth is not merely a two digit number which changes mysteriously every decade. It is a composite figure arrived at by taking into account mortalities at different ages in a population. It should prompt us to ask further questions of the pattern of mortality at different ages and the reasons thereof. The term 5 year survival rate we have come to be familiar with in cancer treatment and prognosis is based on the methods of demography. Needless to say its utility is not confined to cancer only.

Thorough analysis of the processes that determine the values of these statistics has helped attain a high degree of refinement amongst health professionals in the West whereas we still do not have a reliable system of collecting information continually from the whole population on such vital events to tell us what is going on in the community. It is symptomatic of a deep malaise that has set in our medical education with its totally upside down priority of problems and methods, that major and crucial debate on causes, extent and effects of such vital events as infant mortality, malnutrition in children, reversed sex-ratios is being conducted in non-health journals like *Economic and Political weekly*. Need it be said that barring a few notable exceptions the participants in this marathon debate are non-health professionals? Medical profession has by and large no competence and no will to discuss such issues which are at the heart of the health of the society.

With this we come to yet another tool of community health: the theories and methods of social sciences. They are indispensable to grasp social processes as they effect the health of the community.

In the foregoing discussion we have stressed the heavy interdependence of the methods and the tools of community health. This is true of social sciences also. If epidemiology is the study of the distribution and determinants of health and disease in a population, part of its province is the study of social factors. Indeed every epidemiological variable in some sense is a sociological variable. The factors affecting the distribution of diseases in a population may be biological and/or environmental, and both have social implications.

Attributes such as sex, age...etc. have traditionally — in the etiology section of the most of the textbooks of clinical subjects — been treated as biological attributes only; but they obviously have a social meaning. Concentration of diseases and deaths in certain sex and age groups may also mean that they suffer from certain disadvantages because of status in the family and society and norms associated with them. (e.g. greater female infant mortality, greater prevalence of severe forms of PEM in female children, reversal of sex-ratio, extremely high prevalence of iron deficiency anaemia in young women,

and higher rate of PEM in women are not a function of biology but a result of the status of women and children in family and society.)

Disproportionate concentration of deaths, diseases, and disabilities in rural poor-landless labourers, marginal and small farmers, unorganised labourers in urban areas, tribals, harijans, their women and children cannot be understood by such dull and monotonous intonations which occur regularly with little change in the different chapters of textbooks of preventive and social medicine like 'poverty, ignorance, superstition, lack of personal hygiene, overcrowding, poor sanitation... etc..'

These amorphous concepts don't tell us what sort of economic and social processes are at work which produce huge differences in economic and social opportunities to different social groups, situated at different places which all have a close bearing on the health statuses of the group concerned. Further more these factors are in urgent need of more refinement and differentiation in relation to each disease. They call for much harder work and analytical skills than today's medical schools are ready for.

The Result

When a conceptual framework like the one discussed above is missing and perception of need to incorporate the tools and the methods of community medicine in a manner such as discussed above is very dim what happens can be seen, even if hazily, by a few examples given below.

1. It was a health camp of medical students. They were asked to carry out a nutritional survey (anthropometric) of under 5 children. They came back bitterly complaining, 'it was of no use. No mother can remember the birth dates of her children. What sort of mothers are they? If they can't remember dates even, how can we teach them to care for their children better?' This is not an isolated experience. It is part of a pattern. City-bred medical students cannot imagine let alone understand that poor mothers in the villages do not organise their lives by the Gregorian calendar (loosely spoken as English calendar.) They are not in the habit of being asked such 'pointless' and isolated

questions. If you have time, patience and understanding of their time framework then you get birthdates of their children which are accurate enough for the purpose of either monitoring growth or assessing their nutritional status. They recall vividly the days and weeks when their children were born in relation to various points of season's cycles, agricultural cycles of various crops, Hindu or Muslim calendars or festivals, provided we know about these cycles and calendars ourselves. Not many of us know this of course. This is a very small example, but it illustrates rather well that medical education has no use of social knowledge and experiences.

2. A mother comes to a hospital out patient department with a moribund child in her hands. The child is severely dehydrated because of diarrhoea. Almost immediately a chorus of indignant voices arise from doctors, nurses and medical students. 'How ignorant is she... how callous of her to have brought the child at such a late stage... when will these people learn to be more responsible and caring...! She will not and cannot say that she has to go to the fields every morning until evening to earn wages which are always much less than that stipulated by the Minimum Wages Act which nobody wants to see implemented seriously. She leaves the small ones in the care of older ones. If she does not go to work they go without food. Behind this dumb mother and moribund child lies the hideous social reality which nobody wants to know or cares about.

ORT or I.V. drip? This is not a purely technical question. It is certainly an instance of imbalance of salt and water, of acid and base in a child's body fluids but we should remember that similar imbalances occur throughout the year in millions of human bodies who are scattered in hundreds of thousands of villages who have no access to health services. When thousands die because of such imbalances they (these imbalances) no more can remain confined to biochemistry, and medical education must impart this perspective to the students. (How many medical colleges today teach ORT with the intensity and interest it deserves?).

3. Sometime back we were invited to a meeting where the question of high infant mortality in Gujarat was to be discussed. (Gujarat has the

third highest infant mortality in India.) Questions were put to a panel of paediatricians. Pat came the answer without a moment's pause: 'because people are ignorant and superstitious. For instance in measles people believe that it is due to visitations of a goddess and the child cannot be taken to a doctor for treatment, they therefore, don't seek early medical help'.

Again this is not an isolated instance. We have heard this same theme in many variations many times. Either those who make such statements are careless or they betray serious gaps in their knowledge of the type we have been discussing.

a) It is true that a child suffering from measles is not taken to a doctor once rash begins to appear on the body; but then at this stage of the disease the doctor cannot do anything to alter the course of the disease either, even if the child is brought to him.

b) Most of the deaths occur because of bacterial - pneumonias which occur after rashes have begun to disappear; the time when parents are quite ready to take the child to a health service centre provided it is readily available and reasonably cheap. The question is: when an epidemic of measles sweeps through the remote villages are there adequate health service networks to cater to their needs?

Larger and more loaded questions like why measles which is supposed to be a minor ailment without any consequence in well-nourished children extorts a heavy price of mortality (15 to 20%), extensive and serious morbidities such as loss of vision in thousands of children and precipitation of severe nutritional crisis in a high percentage of poor parent's children.

A camp was organised to understand etiology of PEM and infant mortality. Two bright medicos asked: is measles really a problem? Isn't it supposed to be a mild disease after all? We were not surprised to hear these questions. Look for the reason — if you are surprised — in the textbook of preventive and social medicine (referred above) on pages 356-58 (4th edition) where measles is discussed. How casually and cursorily it has been discussed! One almost gets an impression reading his account of measles that he is writing for and about the

upper socio-economic stratum of society. His chapters on history of community health, epidemiology, concepts of community health in which on page 48 occurs a paragraph of about 200 words on community diagnosis which is not so bad as far as the contents go but which is clearly meant to be memorised by medical students and not to be taken more seriously, sociology and health, nutrition and health, and so on notwithstanding; a great violence is done to the cause, concept and theory of community health. This book is supposed to be the main source of 'knowledge' of community medicine for the medical students in India!

Conclusion

In this concluding part we would like to discuss the role of voluntary health groups.

It is true that voluntary health groups like MFC have done a good job to help focus on grave problems that beset the health system in India. These groups have either implicitly or explicitly criticised the system for its excessive biases for: (1) curative medicine, (2) hospital-based health care, (3) cities, (4) the rich and powerful sections in the cities, (5) disease pattern predominant in the West, and in a tiny fraction of the population in India.

The logical compulsions arising from such a damning critique are now pushing these groups to move forward, extend their role into the uncharted territory of alternatives to the present health system whose one subset is medical education. Let there be no misunderstanding here that those who discuss critically the present medical education and alternatives to it are under obligation to run a medical college based on different objectives, values, curriculum and methods. This is a false alternative; it can lead to inaction.

However, the groups themselves have to respond intelligently and sensibly to basic issues to ill health in society discussed in this note. It is through continuing analysis and actions of various groups on at least some of these problems in a similar perspective that relevant, durable, and realistic pieces of knowledge are going to be built. Without such

necessary ground work even a crude prototype of relevant alternative medical education is not feasible.

At this point we would like to direct a searchlight of criticism on ourselves.

We all know that medical colleges as institutions are far too rigid and too bogged-down in quagmire of unhealthy values, wrong priorities and practices to give a new lead. To expect these institutions to initiate relevant changes away from such tendencies is unrealistic at the moment. What has been the performance of voluntary health groups in this regard?

Two broad responses can be discerned. One response has consistently been to lament the fact that forces generated by a particular form of social and economic organisation are responsible for this state of affair. As long as they remain in force, any well meaning attempt to look for an alternative or to try to evolve one-even if rudimentary - is bound to fail or to be crushed by the powerful system. This position has a degree of plausibility when a problem of ill health of community is seen at a very broad level and analysed in terms of categories like gradient of morbidity and mortality along the social classes, unjust characteristics of economic system manifesting itself in income disparities, poor sanitation, poor housing, poor nutrition... etc., etc. Its truthfulness is not in question, as is the truthfulness of the monotonous slogan 'poverty, ignorance, lack of sanitation, poor housing...' which we have felt compelled to criticise in the foregoing part of note.

The second response has been to take certain health activities in the field. The common elements of such efforts are broadly as follows: (1) They work mainly amongst rural poor, (2) they have a team of village health workers, (3) they carry out activities like - (a) immunisation of children and pregnant women, (b) run antenatal and under 5 clinics and (c) do health education. Now there is nothing objectionable against these elements of activities per se. Doubtlessly they are steps in the right direction.

The real problem does not lie in actual activities but lies in the theoretical understanding of the complexity of disease processes in

the community that inform these activities. Even a more pertinent point of view is whether the understanding of diseases is considered insufficient and therefore in need of continual improvement which can be done only by conscious development of abilities and competence in the methods of community health.

Voluntary groups are under obligation to learn new methods and tools to further extend and develop relevant, useful and durable knowledge of diseases in the community. Whatever are the restrictions of the system, it does provide enough scope to develop such actions. The trouble seems to lie somewhere else; voluntary groups are by an large tied down by their own training (this we have discussed at length above) and have also accepted uncritically the notions such as 'most of the diseases are simple and can be treated easily.' The 'felt need' of voluntary health groups excludes these methods and tools. The result is only growth of mechanical, lifeless structures of activities and flourishing of stereotypes without any insight or understanding. The uncritical acceptance of notions such as 'diseases are simple...' which themselves are a product of the ideology of 'ill health in man in hospital' have pushed them if unwittingly into extending outpatient care to the door-steps of individuals.

The criticism which applies to the structure, the content and the methods of teaching of community medicine in medical colleges applies to voluntary efforts also, if with diminished force.

The glaring gaps in knowledge, the blind spots in epidemiology of diseases, as they are found in our situation, the methods of translating this knowledge into useful health activities, knowing the society and social processes which affect the acceptance or rejection of such health activities await serious exploration and trials on a large scale.

Only in this context we say to ourselves: it is not enough to interpret and criticise the health system as it is today; the point is to change it.

MEDICINE AND SOCIETY

Socio-History In Preventive And Social Medicine

Padma Prakash

The practice of medicine has undergone tremendous expansion and diversification. In the last century several factors have contributed to the transformation of medical practice, some internal and others external not the least significant of which have been social, political and economic. From time to time medical education has reflected these changes in the practice of medicine. This amalgamation of current practice with training has not taken place in either a smooth progression or as a matter of course. For example while improved methods of diagnosis and treatment have become part of the training of medical graduates with relative rapidity, the growing body of knowledge in epidemiology and in the sociology of health and illness have been all

but ignored in the undergraduate medical curriculum. This marginalisation of the sociological perspective in has had consequences for the development of medical education and inevitably for the nature of health care.

Whether certain developments in practice or in medical sciences or for that matter in the understanding of a certain illness or symptomatology is amalgamated into training depends on the kind of medical practitioner which society at any given point of time wishes to produce. But society is hardly a homogeneous entity — not only does it comprise people of different age groups and sexes, but also ethnic and cultural groups and socio-economic groupings as well. Conceivably, the health needs of these groups vary, as would their requirements of medical practitioners. In an ageing society as in most countries of the west there would be a greater need for doctors trained in geriatrics than in younger societies. But in a non-egalitarian society not all younger societies. But in a non-egalitarian society not all these groups will have a say in determining the nature of medical education.

What determines the trends and content of medical education then, is the character of the dominant group/section/class in society. This dominance however, is not because of numerical strength but is a consequence of the historical development of society. Again, what constitutes the requirements of this dominant class is not just a derived from the health characteristics of the class/group. For the requirements are rooted in the socio-political needs of the class in charge. In fact not only is the curricula determined largely by these factors, but even the content of these disciplines is tailored to match and sustain the ideological requirements of the dominant class. To illustrate we examine in the following the history and curriculum content of one undergraduate department, viz., preventive and social medicine (PSM). This is relatively new field, having been introduced as a distinct discipline only in the second quarter of this century. In India separate departments of PSM were established only in the late fifties.. What were the factors leading to the introduction of PSM into

the undergraduate curriculum? what has been its orientation and what is its current content?

Preventive And Social Medicine In A Historical Perspective

The term came to be first used in the middle years of the nineteenth century particularly in France and Germany with reference to an orientation which maintained that "resistance to disease was not purely biological but depended on class and social position" [1] Following from this, it was pointed out that prevention of disease was possible through changes in the social structure. This position was of course based on the anticontagion theory, the more radical version of which held that disease arose out of social conditions of poverty, filth, lack of food and the oppression resulting from emerging capitalism. This position is typified by Frederick Engels who firmly grounded disease in the emerging capitalist system and showed how the distribution of morbidity was class-related [2]. In the same period Rudolf Virchow, in reporting the typhus epidemic in Germany called for measures directed at changing the social conditions of the sufferers rather than mere sanitary reforms[3].

The liberal version of anticontagionism attributed diseases to purely biological causes, in this case the 'miasmas'. The emphasis was therefore on removing the 'local sources' of diseases. This led to the sanitary reform movement in America as well as in Britain, brought about major changes in the living conditions of the poor, but left the core of the economic system, which in fact was the root cause of the rampant spread of disease, untouched [4]. Thus it was, that 'social medicine' as understood by Virchow and others rapidly lost ground.

The fate of social medicine in the nineteenth century in fact, illustrates well the framework on which this paper is based. By the middle of the century the deteriorating living and working conditions of the masses had not only sharply visible but in a variety of ways, had begun to impinge on production, profit and the lifestyles of the dominant class. There was for instance, no way of confining diseases to the working class populations, when the system demanded their interaction, even if minimal. Moreover, voices of protest were being

heard not only among the liberal sections but also from among the labouring masses. However, accepting the radical thesis of 'social medicine' was clearly antithetical to the growth of capitalism. Sanitary reforms offered a practical solution, which while mitigating the appalling social conditions of the working class allowed for the unimpeded growth of capitalism. Necessarily these issues more or less went out of the purview of medicine. The emergence of the germ theory in the following decades gave further impetus to the firm demarcation of the medical causes of disease and the social.

From here on while it was acknowledged in medical practice and training that social conditions — that is, conditions in which people live, eat, sleep mainly, and perhaps work — influenced the spread of disease, this was clearly outside the sphere of medical work. Medicine could, however, attempt to eliminate the microorganisms which were the cause of diseases. Disease thus became firmly rooted in pathology, with social conditions being a contributing factor and preventive medicine was to comprise entirely of biomedical methods (and chemical) of preventing illness [5].

By the first quarter of the century the concept of preventive medicine was fairly well-entrenched in medical disciplines. The American Medical Colleges and the American Medical Association had since 1920 stressed the "great need for teaching preventive medicine and public health in the curriculum of the modern medical school." [6]. In 1936 the U.K. General Medical Council suggested that the study of preventive medicine be emphasised because "it is desirable to seek to promote measures other than those usually employed in the practice of remedial medicine, for the protection of the individual and of the community against such forces as interfere with the full development and maintenance of man's mental and physical capacity." Towards this end it suggested that throughout the whole period of study the attention of the student should be directed by his teachers (a) to the importance of the measures by which normal health may be assessed and maintained, and (b) to the principles and practice of the prevention of disease. [7]. But "preventive medicine although of undoubted importance had not yet developed clear cut and generally

accepted objective so far as the teaching of the undergraduate medical students is concerned."

By the early 40s, the post war years, the role, location and content of preventive medicine had undergone some change. It continued to be acknowledged that "preventive medicine constitutes a part of clinical medicine, obstetrics, paediatrics and psychiatry and even much of surgery." However the fact that these ideas had not been incorporated into medical training was also recognised. As the Report of the Inter-Departmental Committee on Medical Schools in U.K. noted in 1944: "It appears to have been assumed that the teachers would have this objective in mind throughout their courses of instruction and would give equal weight to it as to the diagnosis and cure of illness. There is no evidence that such a course is being followed except to a limited degree in the teaching of obstetrics, infectious diseases, tuberculosis and by a few exceptional physicians and surgeons." [8]. The logical outcome with this dissatisfaction with the teaching of preventive medicine as part of other courses led to a general consensus in the international medical community of the time that a separate and well-defined department must be constituted for the purpose. The professor of preventive medicine in the Vanderbilt University, U.S.A defined the scope of preventive medicine in contrast to that of public health for Hance and Pandit in 1945 thus: "Its purpose is to avert those disorders for which there are specific preventive measures and to detect early by accurate and thorough methods of diagnosis the beginnings of illness for which remedial therapy should be effectively applied. Its objective is to aid in the solution of social, economic and welfare problems of the community in relation to disease. It involves the use of a special technique in dealing with the public." [9].

It is pertinent here to observe that communicable diseases which had claimed thousands of lives in the late nineteenth century and the early years of the twentieth were a thing of the past in the western countries. Communicable diseases had long since become 'tropicalised'. Thus the medical graduate of the day did not have to confront communicable disease on as large a scale as say a third of a

separate department of preventive medicine was both sufficient and necessary. Sufficient because this allowed for a general understanding of all communicable disease, their diagnosis and control under the discipline while making room for a more specialised training in specific diseases under say, the department of medicine. Necessary because recent advances in the field of social sciences, say, the use of social statistics, or anthropology could be properly incorporated into the training.

This redefining of preventive and social medicine was a part of the general restructuring of medical education taking place in the west in the 1940s. The main purpose of these reforms was to incorporate into the training of the medical graduate, the scientific and technological advances in the inter-war period and during the second world war. The establishing of PSM as a separate department facilitated this purpose in an important way. It was now possible to dissociate the social from the medical [10]. (This gave rise to newer professional categories such as medical social workers and the health educators) the curative and the preventive. It allowed medicine to become more inward looking where pathology was paramount. All this was ultimately to result in the greater use of chemotherapy and its further development as well as of medical technologies.

Why did PSM go the way it did?

Let us at this point digress very briefly and look at how the growth of social knowledge and social institutions takes place. One might say that it is the internal dynamics of the particular discipline which determine the direction of its growth. But this does not explain why prominent areas of research in science and medicine were given up at particular or encouraged in particular time periods and socio-economic conditions. There is sufficient material today to state that social knowledge and social institutions, medicine included, is greatly influenced, even directed by factors outside the field. They are structured to suit and reinforce the needs of dominant classes in society in any period of history [11]. If we accept this, then the changes brought about in the training of medical graduates in the 1940s in the west, particularly

U.K. and U.S.A. must also have been so directed. It is beyond the scope of this paper and the data base of this author to go into this in any great detail. But it might be a good idea to enumerate the socio-political and economic changes which were taking place during that period.

First, there were socio-economic and political changes which had occurred in the previous two decades. Capitalism in its newest garb was transforming wartime economies to suit its peace time requirements of expansion and growth. Scarce human resources acted as a spur to the growth and development of technologies of production. At the same time the war and other political events had opened up new markets for a variety of goods and potential spheres of influence which needed to be consolidated. The field of medicine was one small thrust area where these factors operated.

Incorporating into medical training the advances in the understanding of disease and its cure — which were as much a consequence of the war time demands on medicine as the application of the basic sciences to the art of healing — was imperative to the post-war capitalism. The miracle drugs following upon the fantastic success of penicillin could hardly be produced and sold if medicine did not modernise. Together with this preventive medicine too was taken out of the cupboard, dusted polished and put on the mantelpiece. Under the new light preventive medicine became mainly a vehicle for peddling the extensive use of chemicals such as DDT and for prophylactic measures such as vaccination. Under this discipline could be subsumed all those vexing issues such as the social factors in the spread of disease, sanitation, community action [12] etc which were of particular interest for the third world.

Situation nearer home

This was the status of medicine and medical training when an independent India began to remodel its medical institutions. The National Committee went to some lengths to suggest improvements and included a detailed syllabus for the courses suggesting the inclusion of preventive and social medicine at the post graduate level. The Bhoré

Committee's exhaustive chapter on medical education was based on the report of the specially constituted committees of two J.B. Hance and C.R. Pandit [14] to visit the various medical institutions in U.K. and the U.S.A. to study the recent changes. [15] They paid particular attention to the teaching of preventive and social medicine in both the countries. The Bhore Committee recommended the establishment of a department of preventive and social medicine in every medical college "so as to give the student an insight social health problems by contacts with home and community life" [16]

The medical education system in India was thus a transplant of the modernised model emerging in the post-war west. While it had a rootedness and a history there, here the new model was alien [17]. Early attempts to integrate indigenous systems into the medical curriculum and evolve a uniquely Indian system of medicine, did not even take off [18]. And the adoption of a curriculum which compartmentalised preventive and social aspects of medicine under PSM was disastrous. While as we argued earlier, it may have had a certain logic in countries where the major communicable diseases had been eradicated where a minimum of living standard were accessible to all. In India with its huge burden of communicable diseases among all classes social factors could and did overwhelm the practice of curative medicine. Moreover, neither was it possible for the 'medical' disciplines to fully take advantage of the advances in these areas, although it did modernise enough to provide a market for the range of new drugs coming out of the west.

Critique of P.S.M. as mirrored in a textbook

For the purpose of examining in detail the undergraduate curriculum content of PSM we have taken the textbook of Preventive and Social Medicine by J.E. Park and E. Park as a typical illustration [19]. The content preventive and social medicine can only be understood against this background. Specifically, we have looked at Parks' textbook of Preventive Medicine assuming it to illustrate the typical curriculum followed in the department in any undergraduate course.

We do not therefore, take into account the numerous attempts in individual institutions and departments in colleges to make the subject more relevant to the situation. These would include material prepared by individuals as well as the innovative teaching methods used. The textbook has gone into ten editions since 1970 and has been a basic reference to thousands of medical graduates. While it is necessary to examine all the material used for teaching PSM as well as take account of the teaching methods utilised to undertake a critical analysis, as a preliminary exercise a critical understanding of the content of Parks' textbook is useful.

The textbook is divided into 18 chapters which don't appear to follow any particular sequential logic. A first chapter on what is presumably meant to be a history of medicine is followed with a series — genetics and health, sociology and health, environment and health. In a sense of course, the chapterisation is indicative of the entire approach to the subject — that the understanding of the preventive and social aspects of medicine can be so compartmentalised. There appears to be no continuity between the chapters. This criticism will perhaps become clearer when we deal with these chapters in greater detail.

Our main criticism is that the book projects a certain picture of medicine, medical practice, and of the role of the doctor. This creates and reinforces an ideology which is biased against certain sections of society. Moreover it delineates for the medical graduate a methodology for understanding social phenomena which views society as a static, rigidly divided structure. According to this viewpoint the components can each be studied separately, can even be modified, improved, changed. For instance, that health behaviour can be changed without altering the social location of the individual or family concerned. This affords the right grounding for the view that medical solutions can not only be independent of social factors, but in fact they override the latter and can even affect social change. While undoubtedly medicine in history has contributed to socio-cultural changes, that it has itself been a product of society is something which is entirely missing in this worldview projected by textbooks such as Parks'.

Simultaneously, the book also projects society as a homogeneous entity where everyone has equal access to the conditions which make for health. There is no recognition of the fact that health status, especially in third world conditions is an indicator of the class location[20]. This may be best illustrated by the manner in which the authors discuss the problem of malnutrition. Socio-economic factors are listed only as one among the many aspects of the ecology of malnutrition. To quote: Malnutrition is largely the by-product of poverty ignorance, insufficient education, lack of knowledge regarding the nutritive value of foods, inadequate sanitary environment, large family size, etc." [21]. The text manages to deemphasise the fact that malnutrition especially under-nutrition which is the major problem in India, is largely rooted in the lack of purchasing power of certain sections of the population which in turn is again both a cause and consequence of the lack of political power to demand and obtain the wherewithal to lead comfortable lives, live in healthy surroundings and work at non-hazardous occupations. Leave alone the issue of class in society, the book does not even admit sex discrimination in society. Surely a book published in 1985 must not claim to be unaware of data on this matter. Any number of studies have shown that women suffer to a greater extent from the problem of malnutrition than do men. Again, in dealing with tuberculosis, the book fails to acknowledge the class-wise distribution of the disease, even though the age and sex trends, time trends and the rural-urban differences are remarked upon.

In general the book tends to medicalise all problems concerning health. Such as for instance malnutrition. Clearly, a social problem it is regarded as a medical problem with social causes and repercussions. Even worse is the way the authors treat mental illness where although social pathological are listed — only third to organic and heredity — the solutions offered stress mainly early diagnosis and rehabilitation just as in any medical problem. The point is except for a small proportion of cases which have organic and hereditary roots, the majority are symptoms of social distress which become manifest in individual aberrations. They can hardly be resolved by early diagnosis of individual cases. The solution lies in the early diagnosis of social dis-

tress, which clearly according to the Parks is beyond the purview of the doctor.

Not surprisingly, the solutions offered by the authors to any of the range of health problems are either individualist or abstract. That is, what the individual can and must do to avoid falling ill or how the government or more often the health services can offer appropriate measures. That prevention of illness can most effectively be brought about through social action of a group or community. Thus it completely messes out the crucial role the doctor can play in such action by providing the group or community with information etc. In fact right through the book the doctor is regarded as a person being apart and slightly above the rest of society.

Let us now look more closely at some of the chapters in the book.

A historical medicine

The first, purported to be a history of medicine runs to nine pages. It is pertinent here to note that this is the only department in the undergraduate medical course where the history of medicine figures at all. It was in 1955 recommended the introduction of history as part of the HSM curriculum. The objective was so that "it would help place the picture of modern medicine in its proper perspective and to indicate how much the developments of the physical and biological sciences has contributed to the interpretation of health and disease." [22] In Parks' textbook we have a travelogue through time, enumerating the 'advances' of medical knowledge rather than an account of the dynamic interrelationship between medicine and society. The authors approach is ahistorical dealing with the developments not in time periods taking into account the social and economic structures of the time, but rather as geographical categories. We have for instance, paragraphs dealing with 'primitive medicine', Indian medicine, Chinese, Egyptian, Greek and so on. This gives a false notion that the growth of knowledge in medicine has been circumscribed by boundaries of nations and states. In fact, although there were characteristic developments in different countries in numerous periods of history, there has also been a process of dissemination and assimilation be-

tween the various centres of civilisation. Modern medicine has its roots in this body of knowledge even though today it may bear little resemblance to it. In consequence the contributions of early medical practitioners and thinkers such as Hippocrates, Galen, are regarded as distinct and separate from that beginning with say, Paracelsus (who "publicly burnt the works of Galen and attacked superstition and dogma in medicine"), Vesalius (who demonstrated some of Galen's errors) and Ambroise Pare (who "revived surgery and became the father of modern surgery.") While it is true that developments in medicine after the sixteenth century represent a break with the past, the continuity of empirical traditions which is so characteristic of the field does not feature in the narration.

The middle ages (dismissed by the authors of the book as the dark ages[22]) saw the development of two distinct traditions of medicine, which were to become competitive in a later period. The inflexibility of the codes of the Catholic church, the widening gap between church medicine and the people, the famines and plagues, the growing impoverishment provided an impetus for the growth of a more accessible cheaper medical care. Folk medicine which had continued to exist outside the Church, largely in the hands of women, began to encroach upon Church medicine[23]. Many historians have seen the witch hunts which were rampant in Europe in the tenth to fourteenth centuries as the manifestation of the attempts by the Church to usurp the folk knowledge and quell the competing tradition of medicine, one monopolised by the rich feudal lords, the richest of them being the Church, and the other practised by and accessible to the lay poor[24].

Park reviews the beginnings of modern medicine, that is in the 16/17th centuries without even referring to the tremendous changes that were occurring in the social fabric of the time. So great was the intellectual impact of these discoveries in the field of medicine, that they in turn influenced other sciences and social ideas as well. For instance William Harvey was the first to consciously use scientific methodology in the biomedical sphere. He also used concepts of quantification to arrive at a hypothesis. And used the concept of the human body as

a mechanical system with the heart as a pump. These are concepts which are integral to clinical medicine today.

Parks' history fails to recognise and trace the ideological trends which are current to this day in medical practice. This would have been possible only if the dynamic interaction between medicine and society is admitted. For example, the predominant social structure of society, cultural practices and prejudices of the seventeenth to the nineteenth centuries, were assimilated in some form or the other into the concepts and content of modern science and medicine's model of a 'normal' human being was a white, adult male. By definition, therefore, women and non-whites were 'abnormal'. These ideas have influenced the development of medicine and set limits on the understanding of particular pathologies and illness syndromes. Similarly, the mechanistic concept of the body as a machine, as distinct from the mind was to limit the growth of medical knowledge for generations.

At the same time because medicine adapted the dominant ideas of the period, and because it continued to retain its long-standing status in society, it was used to reinforce and substantiate these social myths. Thus for example, because women were by definition all physiological conditions experienced by them, menstruation, childbirth etc, were regarded as being abnormal and treated as illnesses[26]. Society in turn promoted and perpetuated these ideas by taking resort to medical opinion. This fact that throughout history medicine and its practitioners have largely been oriented towards supporting and sustaining dominant ideas, often to the detriment of the socially oppressed classes is an important aspect of history unfortunately given a miss by Parks textbook. In short, the first chapter of the book is a disoriented, disjointed account of history which really ought not to have been there at all. If at all the history of medicine is to be taught to medical students, it ought to receive a more coherent, sociological treatment than the one presented here.

Sociology in Medicine : A jaundiced view

We now look at two chapters which give us an idea of the sociological concepts presented by the authors. The book deals with sociology more as a set of terms to be defined rather than as a body of knowledge with a long history. Like other disciplines sociology too a plethora of theories, orientations and schools of thought have richly contributed to its development. Park however, is either unaware of these developments or regards but one school of thought as being important. This approach will undoubtedly leave the medical student with a slightly jaundiced view of the discipline. More importantly, the book does not deal with methods of sociological analysis which are so necessary for the delivery of health care.

The chapter on 'sociology and health' deals with the following "concepts in sociology": society, social structure, social institutions, role, socialism, socialisation, social control mechanisms, customs, culture, acculturation, standard of living, social problems, social pathology, social surveys, case study, field study, communications and social defence in that order. Need we say anything at all about this? One is hard put to understand the logic and the purpose of such a list of 'concepts'. Admittedly these are terms which need to be explained, but they are not concepts. Even the terms cannot be understood by mechanical definitions. Each has to be understood historically, its meaning often having changed with time and the context. Moreover, even the choice of concepts so defined appears biased. Such important concepts as social movements, or social change and what they constitute do not figure here.

It is also significant that in defining social structure the inherently conflicting relationship between classes (or stratas, as Parks would call it) is not recognised. The fact is that some groups are more empowered than others and that these power relationships cannot be altered without shaking the very roots of society.

Society has been defined in a number of ways by different sociologists. In the evolutionary model all societies pass through definite stages of development. For some social thinkers like Durkheim the most im-

portant dimension of society is the degree of specialisation within it which is progressively complex as societies pass through the different stages. In the structural functionalist model it is the interrelationship of social institutions rather than the individual or groups which is to be emphasised [27]. Talcott homeostasis and saw society as constantly attempting to balance its equilibrium by automatic adjustments when upset by internal or external forces.

Parks' textbook appears to have no use at all for this variety of ways in which thinkers have understood society. This is even more true of the other 'concepts'. Certainly it is utterly ridiculous to try to define socialism in 14 printed lines.

What little there is of sociology in the textbook is almost entirely Parsonian. Talcott Parsons developed the concept of the sick role in His writings have greatly influenced medical sociology. According to this understanding there are four essential aspects of the sick role — the sick person is exempted from his normal social role responsibilities; the sick person cannot help being ill; the sick person is expected to get well as soon as possible and finally he is expected to seek help in getting well. Parsons therefore emphasised the need to control sickness. Consequently, social control is clearly a function of the medical establishment [28].

Not surprisingly of course, the textbook deals with social institutions such as the family as being "the most powerful example of social cohesion" which have existed in all societies. "The family is a primary unit in all societies." It is well-accepted today that the family, defined as the authors do viz, "a group of biologically related individuals living together and eating from a common kitchen," not in fact a primary unit in all societies. Quite clearly, the Parks notion of the family is patriarchal: "The family is a bridge between generations and between fathers and sons." And again, "The family provides social care by ... giving status in a society to its members i.e. use of family names..." At one point the book talks of how the "freedom of wives" has enlarged and of how "the young wife in India ... brings to a marriage not only a dowry but a professional or semi-professional education and she seeks a professional career." There are several points to be made

here. First, the changing family structure is a consequence of a number of factors, economic, cultural and social and second, the status women in the family and their role, as well as the functions of the family are not universally the same. Even within one country they vary with class, region and culture. And third, while it is true that dowry is widespread phenomena, to refer to it as an inevitable and accepted feature of society is not quite correct.

The discussions on the family in the textbook are particularly important because social and community medicine confers an significant role on the family in disseminating its message. Thus for instance, the family's traditional role or rather the role of the women in the family, in childrearing, health and nursing care, are the via media through which ideas can be propagated from generations to generations, thus ensuring the perpetuation of the social structure as it exists currently.

Community Health : where is the community? What is "health"?

Another chapter which is a hotch potch is the one on community health. After attempting to define health in a crudely mechanistic way and outlining the relationship between health and development, the chapter moves on to a definition of disease — the interaction of the agent, host and environment etc, and then on to a description of health situation and the health services. While such an explanation for understanding disease may be useful, it can also tend too mechanical. Evidently the result of the interaction of the three is often much greater than the a sum of the three. Moreover it is not possible to change the nature of one without inevitably altering the other two. Altering, say the disease agent may not be possible without simultaneously changing the characteristics of the other two.

Nowhere in all this do we find a definition of community. This is a concept which has created much discussion among sociologists. If by community is meant a group which shares common socio-political features, then a village comprises several communities and it is absurd to talk of a village community as if it is homogeneous. Community medicine is a meaningless concept if community is not defined.

To sum up in this book preventive and social medicine has the following characteristics: (1) Ill health is viewed as a consequence of the interaction of man and nature where the changes in the latter are beyond the our control. The essence of medicine is to help 'man' make the necessary changes so as to balance the changes in nature. (2) The activities of the individual are the major reasons for ill-health — viz, use of unclean water sources causes typhoid, cholera etc, smoking causes cancer, inadequate iron intake causes anaemia, babies die because mothers don't breastfeed; workers die because their work environment is unhealthy and so on. The object of PSM is to teach medical students to help individuals alter their lifestyles without damaging social institutions and norms. (3) The social and political forces in society do not significantly affect the development of medicine or health policy, and the history of though (including medicine) may be viewed as a set of isolable, distinct phases with little spillover. (4) Society is generally uniformly cohesive. Although there are groups and stratas, they do not have inherently conflicting interests and may live together in peace and healthy (5) The human body is a mechanical system and organs are component parts which may be repaired or replaced. In the same fashion all health problems may be reduced to the malfunctioning of a particular part of the subsystem. Biological man rather than the social human being is the ideal. (6) Health is defined and understood in terms of an individual's productive capacity and not the quality of life. By this definition, a worker is termed healthy as long as he can achieve a certain level of productivity. The individual must therefore be helped to maintain this level of productivity irrespective of whether s/he feel healthy. In short, PSM justifies existing socio-economic and political formation by arguing that the aberrations seen in the system are not intrinsic to it but are a result of individual behaviour and may be smoothed over by persuading individuals in communities to accept their fault and remedy the situation. An approach to medicine which has the potential to show up the inherent contradictions in patriarchal class society which in reality determine the health status of a society, has effectively been defused.

The exercise undertaken here is only illustrative, but it does indicate that the orientation of preventive and social medicine reinforces the socio-political framework which papers over major contradictions in society. It helps to justify existing socio-economic and political formation by arguing that the aberrations seen in the system, in this case in the health status of the population, are not intrinsic to it but are a result of individual behaviour or minor faults which may be smoothed over or repaired. If the practice of medicine is to become more relevant, it is here in the department of PSM that the restructuring must start.

Notes:

1. See Birliker, Howard S. and J. Warren Salmon, The Holistic Alternative to Scientific Medicine: History and Analysis, *Radical Journal of Health* 1: 2, September 1986.
2. Among the earliest descriptions of working class life, Frederick Engels' *The Condition of Working-Class in England*, 1969 Panther Books the account is considered a primary source of information on the social impact of capitalist industrialisation and urbanisation in nineteenth century England. "There are few vigorous, well-built, healthy persons among the workers ... Nearly all suffer from indigestion, and consequently from a more or less hypochondriac, melancholy, irritable, nervous condition." Quoting from official reports Engels shows how for instance the mortality in certain streets in a city is higher than in others where the upper classes live, the type of diseases prevalent and the kind of accidents which claim lives.
3. Virchow's report on the typhus epidemic in a remote area of Prussia which he was sent to investigate contained recommendations which had little to do with 'medicine'. It called for higher wages, better nutrition and sanitation, and more interestingly, the separation of the church and the state, the restoration of the native language in the region, public education etc. This was in 1847. See Howard Berliner, *Notes on Historical Precursors of Materialist Epidemiology*, a Health/PAC document, 1976. Several later articles by Berliner, Karl Figlio and others in the *International Journal of Health Services* have discussed Virchow's report in detail. Unfortunately, most medical students only get to know of Virchow's later contributions to physiology, when he was more or less forced to go back to the laboratory.
4. Chadwick's report has been a subject of interest and discussion among historians, as well as health sociologists. No course in public health would be complete without reference to the report. Perhaps the earliest to place it in its

political context was Karl Marx in his monumental *Capital*. See, Volume I, chapters 8, 12 and 13. Penguin, 19. Recent work on these reforms has shown that while some business were affected by the implementation of Chadwick's recommendations on sanitation, it gave rise to new businesses such as water supply contractors and garbage collectors who greatly benefitted. See Derax Foster, *The Evolution of the British Welfare State*, 1973.

5. Histories of medicine generally regard the development of the germ theory and its establishment as the dominant theory of disease causation as the first progressive step towards 'scientific' medicine. This point of view has been challenged by several scholars. See Meredith Turshen, "The Political Ecology of Disease" *Socialist Health Review*, September, 1984.

6. Quoted in *Report on Medical Education and Research* by J.B. Hance and C.G. Pandit, 1945, Education Health and Lands Department, Government of India.

7. Quoted in *Report of the Interdepartmental committee on Medical Schools*, HMSO, 1945.

8. Report as above.

9. Dr Leathers a leading authority on PSM and professor in the PSM department at Vanderbilt University in USA defined it the scope of the discipline thus to Hance and Pandit during their visit in preparation of the report described in 6.

10. See Berliner, Ideology in Medicine.

11. That factors external to the subject discipline whether it be science or medicine greatly influence developments within the area is well-acknowledged today. The first exploration was Hessen's "Social Roots of Newton's Principia" which when it was presented in 1920 caused a great deal of consternation. Either to social factors were not seen as being significant to the growth of science. Some see the development of science through history as an integral aspect of the evolution of societies in different periods. See for instance, J.D. Bernal's classic *Science in history*. Others like Robert Merton view the impact of social factors in a more mechanical fashion.

12. The decades soon after the war saw a great deal of interest among US funding agencies in 'aiding' third world countries to control and eradicate communicable diseases. India's smallpox programme was heavily funded by the US as well as the WHO, some of these were undoubtedly successful in eradication killer diseases. But others, where public education as well as the raising of living standards played an important role became reduced to machineries for distributing vaccines, or other chemicals. Malaria hookworm and yellow fever are three such examples, where international efforts in several countries failed to make an impact on their incidence.

13. The committee was set up by the Indian National Congress in 1936 to prepare plans for the future when the country would be free from British rule. Because of the fact that the years following saw most of the leaders in jail for long periods, the documents ultimately appeared in 1947 after the Bhore committee report had been published.
14. Hance and Pandit were deputed by the Bhore committee to travel to England and to the US specifically to study the post-war changes being introduced there.
15. The Goodenough committee in U.K. had called for major changes in the U.K. most of which had to do with the expansion of fundamental sciences in the inter-war period. Moreover, the stress even in 'social medicine' was more in hygiene, nutrition, health education etc and less on communicable disease, which in any case had ceased to be of interest to the medical establishment there in view of Britain's shrinking interest in its tropical colonies. In USA the major developments in the restructuring had already taken place in 1911 with the famous one on the basis was founded the Johns Hopkins institutions. Hence and Pandit were specifically interested in these institutions, on which they hoped to model the institute of medical sciences proposed by the Bhore Committee (today's All India Institute of Medical Sciences).
16. The Bhore Committee report or to give it the full name *Report of the Health Survey and Development Committee* was published in 1946. Independent India's health system was remodelled by implementing selectively its recommendations.
17. This is not to state that medical education in India or its medicare system until then were more suited to the needs of the mass of the population. Public health system in India was a creation of the British to suit its particular needs, to protect its officials from the onslaught of 'tropical' diseases and other debilitating conditions so rampant in the 'heathen' lands. See Radhika Ramasubban *Public Health and Medical Research in India: Their Origins under the Impact of British Colonial Policy*, SAREC report, 1982.
18. See for instance the Chopra committee which was published at about the same time as the Bhore committee. It proposed a long-term plan to integrate the best of the indigenous and the allopathic systems to create an Indian system of medicine. It was completely ignored in all later debates on the health system.
19. This is true of western countries as well. The controversial Black Report which the British government sought to suppress showed the linkage between social class and a deterioration in health status. For a discussion on the report, see *Radical Community Medicine*, special issue on health inequalities, Spring 1987.

20. p.113 Park and Park.
21. Proceedings of the Medical Education Conference, 1955.
22. Bernal in fact delineates the significant contributions of medieval Christianity to science while at the same time cautioning against the trend to glorify the period. Modern science grew out of the superceding of the medieval world picture.
23. See *The Political economy of Health* by Doyal and Pennel, Pluto Press.
24. Leo Huberman *Man's Worldly Goods*, 1968 and Hughes Penethorne, *Witchcraft*, 1965, Penguin.
25. See Brian Easlea, *Science and Sexual Oppression*, 1981 for critical reading of nineteenth century biology and Hilda Smith "Gynaecology and Ideology in 17 century England" in *Liberating Women's History* by Bernice Carroll, 1976.
26. Barbara Ehrenreich and Deidre English, *Witches, Midwives and Nurses*, Glass Mountain Pamphlet, 1980.
27. A brief but comprehensive introduction to sociology which defines the canvas of the discipline is Alex Inkeles, *What is Sociology?* published by Prentice Hall in the Foundations of Modern Sociology Series, 19.
28. Talcott Parsons, *The Social System*.



'I must be close to the common people, live like them, eat what they eat—' he said, and was away just for a day, Doctor—!

SOCIOLOGY AND IDEOLOGY IN MEDICAL EDUCATION

Anant R. Phadke

In this note I would try to argue that -

- 1) Medical education is not purely technical; whether we are aware of it or not, medical education involves reinforcing of dominant social values and understanding of social issues amongst students along with the technical education they receive about the human body.
- 2) An alternative curriculum in medicine should contain a critique of this ideological role of medical education and impart/strengthen a different type of social values by integrating a pro-people medical sociology in medical education.

A few suggestions about what could be the contents of medical sociology in an alternative medical curriculum are presented at the end.

The Social Background of Medical Students

Like any other social activity the process of teaching medicine is not merely a technical matter but simultaneously has social (economic, political, cultural-ideological) aspects.

Medical education involves spending money - by the Government, community and parents. Not all parents can afford to send their sons/daughters to the long duration and expensive medical education as of today. This excludes many from the poor/subaltern social layers from entering the medical colleges. Long, arduous training which is intellectually demanding and exhausting (but irrelevant and sterile to a large extent) requires students having a social background of a culture and tradition of institutionalised education. Such a medical training has a social function of building a system which tends to exclude the poor and the deprived. This exclusionary aspect of medical education was one of the conscious aims of the medical education in Europe and America in a period where doctors and their associations tried all sorts of means to wrest control from traditional healers and create a professional guild of their own.

A large percentage of medical students come from an upper middle-class or well-to-do background. They inherit the social values of their class through their family, community and school. What are these values? — respect for money, authority, "knowledge" (whatever it may mean), indifference and distrust (if not contempt and hostility) towards the poor people, lower castes, women. They do not realise that their education is paid for by the common people by paying taxes on kerosene, matchbox, clothes... and they owe a lot to the common people. Some students are influenced by values like honesty, hard-work, equality, democracy. But by and large these values are submergled by their opposites. The teachers in medical colleges generally have a much more elite background and many of them have in addition a subservient attitude towards anything Western.

The understanding of society that medical students inherit is also typically middle-class. The cause of poverty is generally attributed to "population explosion", "ignorant, superstitious, lazy people of our country" etc..

Elitist Values

Orthodox medical education does not induce students to question these values and opinions on the basis of a scientific understanding of society. On the contrary it reinforces the elite values and opinions that students have inherited. This occurs both inside the formal curriculum taught in the classrooms and outside it. Let us first briefly see the latter mode where unconsciously certain social assumptions or values enter the teaching of medicine.

When students learn technical matters from their teachers, they simultaneously imbibe the manners, values, opinions of the teachers. They thus learn to behave "like doctors", learn to look down upon paramedics, look at patients (especially poor patients) as mere "interesting cases" or "routine cases", as

objects of their intellectual exercise, look down upon non-allopathic systems of medical care.... Performing heroic surgery, sophisticated batteries of investigations, making spot diagnosis.... is regarded by the teachers as the ideal. Discussing with patients, understanding social aspects of health as waste of time unworthy of doctors. Students are carried away by the intellectual abilities of their teachers and uncritically imbibe their values and opinions about society.

The opinions and values of teachers are not only expressed informally as side-remarks but also appear in the text books. Feminists have documented the irrational, prejudiced opinions of authors about women as seen in medical text books.

Ideology in Contemporary Medicine

Clinical teachers unconsciously project a certain image of causes of diseases and their treatment. The immediate, biological cause (bacteria, cholesterol etc.) of the disease is regarded as the cause of a dis-

ease. Consequently the treatment is primarily seen in terms of drugs, surgery, specific dietary advice etc. It is forgotten for example that tuberculosis in West European and American societies ceased to be a problem (due to rise in living standards) before the advent of modern anti-tubercular agents and that the problem of tuberculosis in developing countries is not receding in spite of modern drugs since the problem of poverty is not being solved. This neglect of social aspects occurs because the basic pattern of medical care is premised on a market economy wherein medical therapy becomes a commodity sold by an individual doctor to an individual patient. A doctor in such a set up is interested in treating only his/her patient. This concern for an individual patient abstracted from the social pattern of diseases in that society very well serves the purpose of the market in medical therapy - though from a scientific view point this is a myopic view of medical intervention. The individualism of the market economy thus puts limitations on the perspective of medical intervention.

Monopoly over and mystification of medical knowledge has been the predominant feature of the medical profession. This is reflected in medical education also. "Health education" as a subject has been exclusively relegated to the compartment called PSM. Aspects of health education important to a clinician are not taught during clinical teaching. The teachers are hardly ever seen explaining to the patient the nature of the disease, its whys and hows, dos and don'ts etc.. The unwritten assumption is that it is no good wasting one's time in such matters. This is especially true in government hospitals where the poor patients are looked down upon and generally not talked to. Even educated patients are not told anything beyond a few dos and don'ts, that too without explaining the rationale or the principles behind these instructions. Inability to explain complicated things in a simple and vernacular language is not considered a deficiency, on the contrary use of medical jargon (necessary or otherwise) is considered one of the hallmarks of medical profession. It is no wonder that even nurses use many English and jargonish words while talking to the patient.

Health or ill-health is a product of social relations. Thus for example, the fundamental cause of the widespread problem of diarrhoea in children in developing countries is poverty, lack of proper water supply and health education. The logic of the market in medical therapy - its individualism cannot by its very nature conduct its practice on the basis of an understanding of the fundamentally social character of the problem of diarrhoea because this practice is premised on the sale of medical therapy to an individual. It is natural that such a perspective sees the cause of diarrhoea mainly in terms of invasion of a human body by pathogens. This perspective sees causes of diseases in the natural environment only, being blind by its very nature to the social cause and hence the social solution to the problem. This naturalisation of causal relations serves a useful function for the vested interests since there's a "scientific" explanation to why a person has fallen sick and how s/he can be cured by the grace of scientific medicine (equated with drugs, surgery). Since market economy and hence commercialised medical practice is presumed by students and teachers, the perspective that diseases are caused by disequilibrium with the natural environment need not be argued out. It can be and also is assumed without any awkward questions being raised so long as teaching takes place at the level of a doctor treating a patient. It is only in the preventive and social medicine department (which has been converted into a compartment - water-tight at that !) that social aspects of medicine are raised. But how and to what effect?

Ideology and Social Function of Preventive Medicine

In other departments students uncritically and unconsciously strengthen their understanding that diseases are caused by pathogens or bad habits. It is only in the PSM department/compartment that there is an explicit discussion on social aspects of health and we must now examine what kind of medical sociology is taught here. But before proceeding towards this inquiry, one would like to emphasise that the paradigm that reigns in the clinical departments is not socially neutral. The "germ theory of disease" has the social function of

naturalising and obscuring the social character of health/ill-health, a process that helps the vested interests.

The concept and practice of public health came into being in Europe when the limitations of the paradigm of an individual doctor treating a patient as an individual were exposed by epidemics caused by the barbaric from that industrialisation and urbanisation assumed during late 18th and early 19th century when workers were not able to defend even their most preliminary rights against their employers. Epidemics could be controlled and prevented only by public health measures. Hence the rise of the concept of public health. The paradigm of public health was a definite advance over the ideology of individual doctor treating an individual patient. But "public health" limited itself only to the task of ensuring the smooth functioning of the market in medical therapy. The development from "public health and sanitation" to "preventive and social medicine" (Community medicine is today a mere phrase) has made inroads into the ideology of individualism in medical practice, of "germ theory of disease" but the sociology that informs PSM renders it incapable of a scientific understanding of social production of health/ill-health. What germ theory of disease does at the individual level, (obscuring the social causes) PSM does at the social level by converting the question of finding out "what changes in social relations and medical technology would be necessary to attack a particular health-problem" into a purely technical question of "which technology would reduce the problem to a socially acceptable level". This is done by refusing to question the particular pattern of social relations which gives rise to a particular health problem. Thus we have programmes of distribution of iron tablets, distribution of Vitamin A doses, mid-day school meal programmes as a solution to the widespread problem of malnourishment in children. Such a strategy is the result of the inability of PSM to see anaemia, vitamin A deficiency, protein-calorie malnutrition as part of a single entity of malnourishment due to poverty, and its companions. Such a strategy thus offers a purely technological solution to what is primarily a socioeconomic problem. PSM devises techniques of medical intervention on a social scale and that's all! Many of these

techniques can be valuable tools, just as antibiotics can be valuable in dealing with health problems in developing countries. (Not all techniques in PSM are useful or innocuous). But the problem is that PSM looks upon techniques as the solution and not as aids to a social strategy aimed at a problem of health seen primarily as due to socioeconomic conditions.

Text books of PSM do mention about social pathology ("Systematic study or inquiry into the relationship between human disease and social conditions") as part of study of PSM. But when the text book discusses concrete health problems it does not go upto the real social causes. For example, when it discusses Venereal Disease Control Programme, there is no mention of how to deal with the problem of prostitution (see textbook of Preventive & Social Medicine by Park). While discussing social factors "associated" with V.D., this book mentions "Urbanisation and industrialisation" as one of the factors which predispose to the spread of venereal diseases. This is misleading since only in an economy geared to individual profit-making and money making, where everything including the human body is sold, does industrialisation and urbanisation take a wicked form and lead to inhuman living conditions, to rampant prostitution and venereal diseases. Vietnam and China more or less eliminated prostitution & V.D. simultaneously with urbanisation and industrialisation. Thus PSM tends to obscure the real specific social causes by resorting to superficial explanations which do not touch the heart of the problem. Heart diseases, cancers, accidents are thus seen as diseases of "developed society" without referring to the method of development of these societies - capitalist or socialist. There's no realisation that industrial accidents would not be substantially reduced by the "vaccine" of "safety education" unless work is not made faster to make more profits, that heart diseases would not substantially come down so long as agro business manipulates the needs and food-habits of the people, that cancers would not recede so long as profit-oriented industrial corporations discharge more and more cancerous agents into the environment. Health-education is not at all sufficient to prevent accidents, heart diseases and cancers. PSM is permeated by a superficial,

eclectic empiricist sociology which refuses to go into the heart of the problem. PSM gives an appearance of considering the health-problems within a social perspective. But in reality it does so only superficially and obscures the deeper social causes of health-problems.

If we want to formulate an alternative curriculum in preventive and community medicine we would have to make a much more detailed critique of the unspoken assumptions and the role of conventional PSM, as well as the sociological concepts and explanations it offers. Such a substantial, detailed critique can form part of an alternative curriculum. It is hoped that the critical remarks made above would stimulate efforts in this direction.

Some suggestions towards an alternative

As shown earlier, medical education is not purely technical. The alternative medical education should identify, analyse and reject the sociological presuppositions and concepts, perspective and analysis that permeates conventional medical education (along the lines indicated above) and replace these with alternative presuppositions, perspective and analysis. What follows are some fundamental, broad hints about how social science can be integrated into medical education.

History, economics, politics cannot be taught in a medical college, but a list of classics in these subjects should be given to students as recommended readings and this literature be made available in the college library.

Medical sociology should however, be included in the formal teaching course in community medicine. It should consist of -

- 1) A critical history of the medical profession, throwing light on how doctors have helped to reinforce the status quo.
- 2) Political economy of health - A study of how health/ill-health is fundamentally a product of socioeconomic relations and how technological measures can have important but subordinate role to play.

3) Political economy of commercial medical care - role of doctors, drug companies, health insurance companies and hospital equipment manufacturers.

4) Critical analysis of the value-relations that are necessarily established by conventional type of medical practice - respect for money, "expertise", belief in technological gadgets etc. Identifying which values we want to enhance through our medical work - importance of collective work, democracy, demystification of medical technology, social character of health problems etc.

5) Identifying the blind-spots in conventional medical thinking - women and medicine, occupational health, medico-social problems.

6) A critique of conventional medical ethics and a study of new medical ethics.

7) An account of different experiments in alternative methods in medical care.

8) What should be the ultimate goal of socially conscious medics, why and how to achieve it.

The doctor who will be likely to be happy and contented in rural areas is the doctor who has been born, grown up and been educated there. In the future not only must his primary and secondary education but also a high proportion of his medical education be undertaken in rural areas. This latter is particularly difficult as the majority of present medical teachers would themselves be at a loss how to provide medical care in a rural setting.

— David Morely.

AN ALTERNATIVE MEDICAL EDUCATION

A report of discussion at Anand.

Ashvin Patel.

In 1983, a few members of mfc were invited to Dhaka, Bangladesh, by Gonoshasthaya Kendra, to participate in a workshop on an Alternative Medical School for training a doctor suited to the needs of health services of less developed countries, with a distinct rural bias and with primary health care as its goal.

In order that the interventions of the mfc members in the coming workshop be meaningful and be supported with the group's consensus views, a meeting was organised at Anand, just after the IX Annual Meet. The main aims of this meeting were to define the role of the new doctor - or primary health care provider, as the meeting preferred to call him/her, to define the main categories under which

the question of an alternative curriculum could be discussed and to arrive at a reasonably deep consensus and understanding about some of these categories. What follows is a brief report of the main points on which some common understanding was reached.

Some time was spent to decide terms of reference. The following points emerged out of that effort:

- 1) Although the whole exercise was being done in the context of a workshop on alternative medical curriculum organised by G.K., Bangladesh, we should also think in the Indian context.
- 2) The exercise would not suggest reforms or alternatives in existing medical education given by medical colleges.
- 3) The exercise was being done to have a "model" medical school which may produce primary health care providers who would be competent to plan and implement health care services to meet the needs of a population in a defined geographical area, say a block or population of 10,000.
- 4) It was then agreed upon to work out some details of various categories in the following order.
 - (a) Social context in which the primary health care provider ("doctor") is to work.
 - (b) Role and objective of the education.
 - (c) Criteria for selection of students
 - (d) Nature of setup of training centre and resource personnel.
 - (e) Selection and reorientation of teachers.
 - (f) Methodology and content of course.
 - (g) Structure and content of course.
 - (h) Method of evaluation.
 - (i) Ongoing education.

It was felt that unless this model school effectively demonstrates the competence of its graduates to meet the challenge, it would not make any impact to initiate changes in present medical education. Neither should it try to enter into competition with present medical schools nor should it strive for recognition in terms of future post-graduation

study. This may lead to compromising the spirit of the endeavour. However, questions like the place of the new graduate in the hostile existing system would pose a lot of problems as regards its viability. Apparently objectives, course contents, methodology, the nature of the setup etc., may look similar to, if not identical with, some of the programmes or schools which profess to play the same role as the proposed school. Then the crucial question is, where does this school differ? Though there may be apparent similarities in various categories, minute and specific details of each category would point to the direction of the alternative. Due to lack of time, all categories (a to i) could not be discussed. Again it was not possible to go into minute details of the categories discussed. Only important issues and broad agreements were delineated. It was thought that we would have to do a lot of homework on these issues and categories and meet again to share and discuss. It may require two or three such meetings to reach a reasonably sound and informed view about the alternative medical education.

Now various issues, agreements, views, etc., about categories "a" to "i" follows:

a) The social context in which the primary health care provider is to work: The opinion which ultimately prevailed was that students should be trained for various activist and development groups and voluntary health projects working for people's health. He/She should be trained to work as a part of a team.

Another opinion was that he/she should not be bound by such context and must be competent enough to practice in individual capacity as well. Social context needs a lot of exploration and sharpening.

b) Role and objectives of the education:

She/He would

- be able to plan and execute health programme for a defined population.
- be able to relate to the perspective of the group with which s/he is to work.
- be able to understand social reality and processes.

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- be able to make community diagnosis and train C.H.V.s
- be able to use clinical skills and preventive methods to meet the needs of the people.
- have developed managerial skills and ability to integrate various programmes.
- realise his/her role as a participant in a group and de-emphasise his/her role as a "leader" at the top.
- have increased his learning capacities.
- be able to identify areas of the relevant research and carry out such research programmes.

c) Criteria for selection of students:

- Students would be selected and sponsored by her/his group on guidelines provided by the school. One of the teachers would discuss guidelines personally with the groups.
- Final screening and selection would be done by the school.
- Minimum formal education qualification may be final schooling.
- Social criteria like political perspective and attitude for new role should be examined.
- Judging the motivation of a student is a difficult area and needs further exploration.
- How to increase acceptability by the community and decrease the drop-out rate also needs exploration.
- Selecting C.H.V.s, A.N.M.s, etc. may be useful, but de-conditioning of previous training may pose a problem.

c) Nature of setup of training centres and resource personnel:

- Training centre's setup should be appropriate to the social context and the institutions in which the student is going to work in.

AN ALTERNATIVE MEDICAL EDUCATION

- There would be a central institution with minimum structure providing learning of basic science and clinical practice like general medicine, surgery, obstetrics and gynaecology, paediatrics, epidemiology, etc.
- Institutions would neither be a big regional hospital nor a small upgraded primary health centre. It would be of the size of a district hospital with community health as its priority No 1.
- There would not be special traditional departments.
- There would be peripheral extension rural units where students would spend considerable time for learning.
- All aspects and areas of training would not be located in one institution. Different resource centres including existing medical colleges, voluntary hospitals, P.H.C.s, private practitioners, non-medical persons and institutions would be identified for various components of training. Such centres and persons would be competent and appropriately oriented ones.
- This setup would be devoid of hierarchical relationship among various categories of staff and staff-patient relation. The whole setup would reflect practice of egalitarian values in its day to day working.
- Various categories of workers like M.P.W.s., nurses, C.H.V.s. would be trained together in relevant topics.
- Though there would be no specialisation, elective concentration in some area may be promoted.
- Training would be in modern medical science (allopathy) only looking to limitations of our understanding of other systems of medicine. Traditional medical systems like Ayurveda, Unani Homeopathy etc., would not be incorporated. But positive efforts would be made to break communication barriers to promote understanding of other systems.

e) Selection and reorientation of teachers:

- right attitudes and proper orientation of teachers about the values, structure, content and methodology of training programmes are of paramount importance. Necessary competence and knowledge are of equal importance. To get teachers with such a combination may be a real bottleneck.
- Taking up an exercise of in-depth case study of a community health project may expose prospective teachers to the intricacies of the problems and may help them to grasp a perspective and to reorient themselves.
- Continuous group evaluation with students about teaching programmes may also help considerably.
- Visualising training role by observing C.H.V.s practicing in the field may help the teachers.
- Teachers may collectively define the area of further learning for themselves and get trained in those areas.
- Non doctors, like C.H.V.s, nurses, dressers would have an important role in training.

f) Methodology of training:

- Regional language would be preferred as a medium of instruction and learning.
- Theory and practices would be integrated, e.g. anatomy may be learned in context of its practical application.
- Students would be given specific responsible work, e.g. posting in pathological and biological laboratories, working with dressers and nurses. Here he/she would work under direct supervision of these personnel.
- Community medicine would not be taught in isolation, it would form an integrated and indivisible part of all disciplines.
- Clinical and pre-clinical subjects would be learned in an integrated way.

- Audio-visual aids which may not be relevant for use in community may not be used in teaching students.
- Bed-side manners, respect of patient, i.e. ethical norms, would be evolved and practiced in teaching and learning.
- Various methods to increase capabilities to learn oneself and to discriminate between contradicting, conflicting and confusing informations is an area for further exploration.



Is our country that short of doctors!

SOME ISSUES FOR GROUP-DISCUSSIONS

Ashvin Patel

It is not that, only we are dissatisfied with Medical Education in India. Developed countries are also not happy with their Medical Education. Lot of research about educational inputs, curriculum, methodology of teaching and learning and evaluation is being done in other countries. We have defined the objectives of Medical Education and nature of its end product. Question still remains, whether the doctor we want, would demand less capabilities than the present one; or he would be more versatile and competent to correlate various forces, factors and happenings; in particular, socio-economic and cultural situation to the health and diseases of people. Would he be able to respond intelligently and in a more informed way than what today's

doctor does? The answer to this question would determine the structure, contents and methods of an alternate Medical Education.

This meet is to discuss three categories of issues :

- 1) Content and structure of pre-clinical, clinical and para-clinical subjects;
- 2) Content and structure of community medicine and
- 3) Methodology of today's Medical Education.

All the three issues are so closely inter-related that many issues would be common to all of them. Questions formulated below are to focus on some issues in each category; and questions are not necessarily in a logical sequence and may be apparently disconnected to each other. Numbers in bracket refer to the numbers given to the passages in the " random notes " at the end of these questions.

A) Structure And Content Of Pre-Clinical, Clinical And Para- Clinical Subjects

1. Is this division correct or rational? What does it indicate?
2. What are the determinants of curriculum content : Job Analysis i.e. actual utilisation of concepts and techniques by various practitioners in the field; or actual long term needs of the population?
3. What functions inform or guide the structure and content of curriculum : i.e. (a) cognitive functions dealing with concepts, knowledge and intellectual skills and abilities; (b) affective functions dealing with attitudes, values, doctor- patient relationship, mode of response, ethics, motivation....etc. (c) Psychomotor functions dealing with skills? Why?
4. Who should plan the curriculum? for Whom?
5. What are the criteria to decide the time allocation to particular subject, may be pre-clinical, clinical or para- clinical? What contents should be weeded out, what contents should be added? Why?

6. When and to what extent should basic sciences be given a place? Why?
7. Why more weightage is given to clinical sciences as compared to non-clinical subjects?
8. What are the roles of : a) fixed curriculum; (b) clearly defined flexible-core curriculum and (c) a free elective curriculum?
9. How would one make sure that relevant contents are learnt actively by students? Do we have such methods worked out and their efficacy having been tested?
10. Do we have a perspective regarding secondary and tertiary health care in organic link with the perspective and the approach of primary health care?
11. Why the so-called progressive changes in Medical Education have not been implemented effectively; is it a lack of knowhow, a lack of imaginative minds, or a lack of will?

B) Content And Structure Of Community Medicine

1. Does community medicine or P.S.M. need separate department, or teaching in the first place?
- 1.1. What are the consequences in terms of (a) content, structure and methods of teaching community medicine due to such an isolated view; (b) teaching basic pre-clinical sciences and clinical sciences; (c) the ultimate image of the community-medicine approach, on the students and the teachers?
2. What leads to a tension between basic sciences and clinical sciences? Is this tension real?
3. How are the priority problems being dealt with in P.S.M. teaching and text-books?
- 3.1. How are women's issue, occupational health....etc. being dealt with?
4. How effectively are students introduced to various methods and tools of community health, like epidemiology, demography, statistics, theories and methods of social sciences, so as

to equip them with understanding of problems in the overall social context and with problem-solving abilities?

- 4.1. What exactly is wrong in the teaching that leads to incomprehension about these tools?
- 4.2. What place has been accorded to control and eradication strategies for smallpox, tuberculosis and malaria?
5. Do the health determinants taught in P.S.M. reflect the social process?
- 5.1. What place does political economy of health get in the present teaching?
6. What value system, attitudes and positions does this utter failure of community medicine teaching lead to? How can it be corrected : by reducing contents and time, improving the methods of teaching and employing the latest audio-visual aids?
7. Do we have enough understanding of disease (health) in community which can lead us to social action for durable results? What can be the rôle of concerned and competent voluntary organisations?

C) Methodology Of Training

1. Is the present methodology ineffective in serving its objective, i.e. to produce hospital oriented doctor?
- 1.1. Is it a question of improving methods or making it more interesting?
2. What is wrong with the methodology : lack of proper communication - methods and media; sequential teaching instead of integration; disassociation between theory and practice; teacher oriented methods; curriculum is defined in terms of time rather than performance; lumping students together in one class instead of dividing according to common aptitudes, needs and abilities; or something else?

3. Innovative methods of teaching and learning like group - discussions, seminars, case-studies, field-visits, assignments, integrated clinics, practicals, laboratory work, bed side teaching, student teaching, responsible job- work, audio-visuals....etc. have been used now; then what more - or different - do we need? Why?
4. How and where do these methods lack the approach and perspective of community health?
5. How and why do they fail to impart new values, attitudes, skills, knowledge/abilities to comprehend and solve problems?
6. Is it just a question of pedagogy?
7. What sort of efforts are needed to make these methods effective?
8. What is the role of various types of examinations as a subtle method deciding the outcome of medical education?

To try moulding a doctor's aspirations after he has graduated from medical school is absurd. Doctors should be trained at least partly in the places where they are likely eventually to find themselves working.

— Earthscan, 1978.

REPORTS OF GROUP DISCUSSIONS AT TENTH M.F.C ANNUAL MEET

Group A: Structure And Content Of Pre-Clinical, Clinical And Para-Clinical Subjects.

The group consisted of about 15 people of varying backgrounds - social workers, doctors, teachers, interns and medical students.

At the beginning of the Meet, we were given a set of questions prepared by Ashwin Patel, related to the topic to facilitate the discussion, and three main areas were identified from amongst them: (1) Process of formulation of curriculum. (2) Structure and contents of the curriculum. (3) Implementation and evaluation of the curriculum.

1. Process of Curriculum Formation: The discussion was initiated by pointing out that the curriculum formulated by the British did keep in view the job analysis of the doctor i.e skills essential to serve the British Army and the local elite. The present curriculum is based on the British pattern but the job analysis has become blurred as a result

of changes brought about in the curriculum and the health set-up. According to one view, there have been changes like addition of preventive and social medicine in rural internship to serve, at least on paper, the rural based PHCs. A super-imposition of this on the existing British pattern has made the implicit job analysis hazy and confused. These changes may be in wrong direction but their significance should not be overlooked. An opposite view contented that these changes are superficial and not fundamental, "only quantitative but not qualitative". Though the job analysis on paper has become hazy but as a determinant of curriculum content, it still remains the same! To serve the interests of the local elite. It was felt that the discussion could be better understood in the light of Ravi Narayan's article in the Bulletin on "150 years of medical education". Proponents of both views agreed that the curriculum content is certainly not determined by the long term needs of the people.

Here, it was suggested that if the curriculum is to serve the real needs of the people then certain guiding principles should be fixed at the national level but should have enough flexibility for covering regional variations and problems. This was countered by another view arguing that the present curriculum itself provided enough flexibility for a such an exercise. It was even possible to formulate a people's need-oriented curriculum within the present structure, only it required a meaningful and strong-willed application. This was opposed by pointing to the inadequacies in the 'flexibility' of the present curriculum e.g. it cannot accommodate teaching of skills required for managing a small health centre, paramedic training or planning a health education programme. At best, it provided for a possibility of laying stress on this or that problem included therein. Since the question of adding new skills and their teaching was raised, the students were asked to share their opinion. They felt that if the subjects taught had the right orientation, contents and methodology new subjects would not be burdensome to the students. However, a question was raised, as to why there should not be minimum level of skills and knowledge laid

down in the curriculum itself. That would reduce a lot of unnecessary teaching and learning giving more scope for new, more relevant topics. Presently, the curriculum gives an area to be studied which is vast, almost unlimited.

The opposing viewpoint argued that laying down a minimum would mean limiting the vision and knowledge of an undergraduate who should be a first-rate physician. This was countered by the argument that limiting the horizons of the undergraduate does not mean a second grade doctor, it only means training a doctor better suited for the role envisaged for a basic doctor and limiting the teaching only to areas relevant to performing such a role. It may also mean widening horizons in certain other areas like political economy of health, and demography.

One participant felt that the student should be given some idea about indigenous systems of medicine because a doctor is often asked by patients about a certain therapy or drug or certain beliefs based on indigenous system and he/she does not have any idea about these. Two different views favouring the proposal emerged. One view that the basic principles should be taught so as to enable the doctor to understand and respect other systems of medicine. The other view favoured imparting of a limited awareness regarding:

- People's beliefs based on the indigenous system.
- Possible toxic effects of drugs used in these system.

This equating of indigenous systems with people's beliefs was objected to, on the grounds that indigenous systems should be considered as proto-sciences with a rational body of knowledge and concepts having a potential of developing scientifically.

A totally differing view opposed any inclusion of indigenous systems at all because:

- a short course would be inadequate to understand even the basic principles;
- their concepts are so different from allopathic system that they would cause a lot of confusion.

It was important to develop a correct attitude towards these systems.

Ultimately, the group agreed that there was a clear need to impart some knowledge about these systems but there is no clarity about how much and what was to be taught because the efficacy of these systems is not properly understood.

The discussion on who is to form the curriculum was initiated by informing the group about how the curriculum is formulated at present. The group was told that is a committee consisting of senior professors of various faculties of medical colleges that formulates the curriculum. This system was found to be grossly defective by the group because.

- Such a committee does not and cannot reflect the real needs of the people, not being in living contact with the people nor being sensitive to their needs.

- It is not directly involved with day-to-day teaching.

- The members are primarily clinicians not necessarily well versed with the science of education.

Thereafter, two divergent views emerged on a relevant alternative. One view opted for a curriculum planning committee consisting of elected representatives of student bodies, teachers the University and of the people. It was argued that although a people's representative might not be able to contribute to the academic aspects of the curriculum but could certainly opine upon ethics, doctor-patient relationship etc. Similarly a student's representative would more meaningfully contribute to the methodological aspects. There was a suggestion for co-opting members from the non-governmental health sector involved with innovative health work and amongst the educationalists.

Variants of this view suggested consultation with senior students and junior teachers before formulating the curriculum.

The opposing view proposed a committee consisting of concerned professionals working in the field in the non-Governmental sector because, they alone can reflect the needs of the people. This view objected to representative body because they felt that the students and

the teachers not only cannot reflect the people's needs but also, at present they are, concerned with their own interests.

These arguments were countered by the opponents by pointing out that first, the students and the teachers' orientation can be presumed to be pro-people if it is the alternative as envisaged in the "Prerequisites" that is being talked about and second, even if the existing situation is considered it can be argued that while the views of the students' or the people's representatives might not reflect the real needs of the people, it does provide for the only opportunity for a sincere people's organisation or a pro-people student's body to make an impact.

2. Structure and Content of Pre-clinical, Clinical, Para-Clinical Subjects: To begin with, it was generally felt that the very terminology used in this division is clinic-biased and reflects a lack of understanding of the concept of community medicine. It was conceded, though, that divisions are essential to ensure a smooth functioning but today they have become watertight compartments with little interaction which is undesirable because it interferes with a holistic understanding of health and disease. Except for lone dissenting voice, generally the group felt that an integrated systemwise teaching following a brief course in basic sciences would be better. It should include an early exposure to the actual health problems as encountered in wards and in community. By systemwise teaching it was meant teaching the anatomy, physiology, pathology, medical and surgical conditions and interventions, pharmacology of the drugs of a particular system, all this with a predominance of community health orientation. Such a system was preferred because it provided an approach for an holistic understanding of the human body and its problems and it prevented medicine from becoming an academic exercise.

The dissenting viewpoint contended that the present system was better because in order to understand the pathology of one system it was often necessary to know the anatomy and physiology of some other system/s as in the case of cardiovascular and respiratory systems. Similarly, drugs used in diseases of one system might have side effect

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on another system the physiology of which must be known in order to comprehend pharmacology.

But, it was argued, the integrated approach had other advantages like it avoided duplication of teaching the same facts of anatomy and physiology. Moreover, it was argued that the problem is not just that of interpreting pre-clinical and clinical subjects but more that of correlating constantly what was being taught throughout the period, and imparting to it a community centered orientation.

Two divergent views emerged on the question of time allocation and weeding out/adding of contents:

One view argued that the contents be strictly determined by the ultimate role that the doctor was going play. It would certainly mean curtailing of irrelevant aspects like rare health problems or those not amenable to, simple interventions, alongwith their "Pre-clinical" aspects. Moreover it would mean addition of new aspects and themes like demography, political economy of health or practical skills like reduction of Colle's fracture management of childhood tuberculosis etc.

The opposing view contended that nothing should be weeded out and the academic standards of the MBBS course should not be compromised. The doctor should be trained to be a master clinician which requires a sound foundation in pre-clinical and clinical sciences. Also some aspects might seem to be irrelevant but they were essential to build up a scientific approach to a problem.

But, it was argued, what people needed was not a master clinician but a basic doctor who is expected to be a more relevant, better equipped "MBBS" doctor.

In the context of basic sciences the group felt that the contents relevant to the health and other problems that the basic doctor would tackle should be retained, the rest weeded out. But it was thought prudent to reserve judgement regarding a specific theme as no correlation had been shown experimentally between the contents of basic sciences and the ultimate results.

REPORTS OF GROUP DISCUSSIONS

Several factors contributing to more weightage being given to clinical sciences were identified. They were:

- more material incentives to its practitioners both in private as well as hospital practice.
- clinical practice being more prestigious as a clinician can show a direct result in the form of immediate relief.
- Traditional belief that the doctor should be a clinician healer.

Next, after clarifying its understanding of the terms fixed curriculum, clearly defined flexible core curriculum and free elective curriculum, the group felt that the present curriculum fitted into the first category. But, the group thought that in view of the previous discussion if one considered it as flexible enough then after reformulating the contents the structure of an alternative curriculum could remain the same.

But, a participant contended that a free elective curriculum gives the student an opportunity to explore various areas of his/her choice not necessary with a view to specialise. A differing opinion argued that it may be relevant for developed societies as they offered a wide scope of productive activities after graduation but when we have a relatively fixed role in mind its relevance is lost. Moreover, making available facilities for a large number of elective courses would involve extra expenditure.

This view was countered by pointing out there was enough scope of offering electives even within the framework to suit the role envisaged by us. Over and above learning the fundamental aspects of areas like rural pediatrics, simple anesthesia, sociology community diagnosis and demography etc., a student should be given an opportunity to upgrade his/her understanding/skills in those areas if he/she chooses to do so by offering them as electives. The group accepted this point unanimously but a few modifications were suggested.

One proposal was to allow the student to choose even conventional subjects like physiology, pathology, ophthalmology etc. as electives, but that the university/medical college should formulate special courses only for priority areas. A differing view proposed offering only the priority areas as electives as under the existing predominance of clinical

cal medicine, such a choice would mean a rush for conventional areas like pediatrics.

Another suggestion that an incentive be offered to those opting for priority areas in the form of credit marks/priority for getting a job/post graduation in that department was opposed by pointing out that incentives kill initiative and students would be attracted to priority areas only for those credit marks. It also makes a mockery of the freedom in choosing a particular area. The suggestion that degree be not awarded till one elective course was completed was opposed on the same grounds.

After much deliberation regarding the time duration and the period when elective should be offered, the group came to the conclusion that it was desirable to have a fixed basic curriculum tailored to the needs of the role expected of the basic doctor with elective courses, provided that enough time to grasp the principles/enhance the skills is allotted to the elective, preferably within the period of graduation and that there is a mechanism which prevents an undue rush in any one area.

It was suggested that as an immediate demand, at least those areas which are not all included in the existing curriculum like political economy of health, community diagnosis etc. be offered as vacation electives so as to give a chance to a sensitive and interested student to achieve a better understanding of his/her role.

3. Evaluation and Implementation: The group felt that to ensure a correct and effective learning of the relevant contents a relevant methodology also needs to be developed. As another group was already discussing this theme, it was not discussed further.

The group felt that the concepts of secondary and tertiary levels of health care need to be clarified. It was suggested that they be seen as levels of health care according to the sophistication of 'knowledge and equipment required'. The group felt that there is a need to give at least a general idea of what forms other levels of health care. Since the basic doctor is expected to be equipped for primary level care only, special training would be necessary for him/her to work at secondary/tertiary levels.

The group thought that the reasons for non-implementation of so-called progressive changes in the curriculum were different at the level of policy makers and at the level of health activists like MFC. For the former it cannot be said that there is a lack of will or imaginative minds or lack of knowledge because the will, and knowledge and the imagination are manifested when it comes to making of and implementing of policies in the interest of the elite classes. It is not true that due to active resistance of the health bureaucracy and the technocracy, new pro-people proposals of various committees go unimplemented.

At the level of health activists where the will to change is present often inability to innovate or a lack of knowledge and skills do come in the way of effective implementation.

Actually, both these reflect the undemocratic culture generated by our society. Activists too have no initiative, no self confidence to innovate. The entrenched bureaucracy and the technocracy has no interest in having a dialogue with the actual implementors, field workers and the people at large. The group felt that this was true sometime even for the health activists. It was suggested that at least they should try to overcome this stranglehold over their thoughts and actions and strike at the problem lying at the root of the social structure.

Dhruv Mankad.

Group B: Content and Structure of Community Medicine.

This was the largest of the three groups. Most of the non-medical participants of the meet opted for this group and so, the discussion rightly focused more on the socioeconomic aspect of community health. The complex interaction of socially conscious medical students, doctors, sociologists etc. led to a very lengthy but intensive discussion which helped in developing further understanding of relationship between socioeconomic order and health. Time was insufficient and even after an additional session many issues could not be discussed.

The first question that was posed by the participants was: "What is community medicine?" One participant felt that in one of the background papers bio-medical intervention is emphasised more and so we should make more efforts to find out other forms of interventions. After discussion, two suggestions were made: (1) In community medicine, we do not make mere medical diagnosis of the disease e.g. when we see a case of tuberculosis, we also try to find out from where that person is coming, to which socioeconomic section of the population he/she belongs, what are the conditions of that section which makes them more prone to that disease etc., Treatment also is not curative not sufficient to talk in terms of diseases only, but social illnesses like market exploitation should also be included. It was agreed that such social illness impinge upon health disorders in society and need to be included but while keeping the focus on the health issues. Here the participants added that in certain disorders like mental problems, the social forces are primarily responsible for those disorders and so they should be given greater emphasis.

While responding to the question whether community medicine or PSM needed a separate department, the participants agreed that irrespective of the fact whether there is a separate department or not, PSM teaching should be integrated with the teaching of order subjects. In this context, a discussion on hospital and community came up. One suggestion was that hospital and community should not be counterposed. Many of us counterpose them as we separate secondary and tertiary aspects of health care from primary health care. Present day medicos remember more of secondary and tertiary aspects of health care while primary health care is usually forgotten or neglected. If we take them as an integrated whole, then we realise that hospital is nothing but an extension of the community. It was pointed out that if doctors are to make community diagnosis, they must understand what society is. This point led to the discussion on what we mean by the community. It was agreed that community is not a homogenous entity but there are many divisions/differences within it. On this a question, was raised: Why call it community medicine and not social medicine? The latter would explain the nature of the com-

munity we are dealing with in India. Two viewpoints were put forward: (1) One was that the word community, medicine better explains the type of approach we are taking up and at the same time we should keep in mind the divisions within the community. (2) Another view was that the word community has a connotation of community and so sometimes the understanding of the divisions within community gets blurred. On the other hand, if the word 'social' is used, it will better explain the differences and inherent conflicts in the society. This discussion was not continued further as it was understood that both viewpoints, agreed on the content of our understanding of 'community' and 'society'.

At this point one participant argued that it is not enough to say that community is divided within itself but we should also recognise that the tools of community health have been developed in a particular social structure and so, they are not value free.

It was agreed that we should know how such tools have been developed but some participants felt that they were not so value loaded that they should be altogether disordered. Merely because some people have misused and are misusing them they do not become invalid. On the other hand they very same tools can be utilised by the exploited masses too fight against the system itself.

In response some participants argued that it was not a question of use and misuse or validity of the tools but the need to understand that in every tool there are some ideological constructions which are inherent and which should be exposed. Thus, it is not sufficient to say that community medicine should recognise divisions and conflicts in the society but to question the ideological substructure of the tools of community medicine. It was agreed that tools are value loaded and they have limitations, but are these limitations inherent? Here, the example of the stethoscope was given and argued that it is used for the same purpose for all. Others argued that this is not necessarily so. A hoe used for tilling land is used by the children as toy. Some participants contested two points made in one of the background papers. These were: (1) We do not have relevant, useful and durable knowledge of disease in the community, and, (2) we must consciously

develop abilities and competence in the methods of community health. It was suggested that examples should be given to prove that these tools are so value loaded that they cannot be used at all.

In response, the example of psychometric method was given. It was argued the psychometric methods of measuring human behaviour mystifies the social reality. The very act of quantifying human behaviour makes the psychometric methods biased.

Some participants further suggested that concepts historically develop in socio-political system and therefore, concepts have an ideological substructure. This ideological substructure should be made explicit and exposed. We should use these tools remaining conscious of their ideological substructure and inherent limitations; only thus, can better tools or concepts be evolved. Since participants agreed to disagree, this debate was stopped at this point and the group went on to discuss other points.

Next, the context of preventive and social medicine was taken up for discussion. Park's textbook on PSM was taken as a case study. Participants made the following comments: (1) Park's textbook is a useful book as it discusses certain aspects like epidemiology. But there are certain weaknesses also. For example, agent, host and environment are given equal importance, which is actually incorrect. (2) The book has failed in motivating students. Also, students have no chance to put into practice what they learn. In response to this comment some participant said that motivation does not come from the book alone. (3) Areas of limitations in this book were mentioned but were not discussed in detail. One such area that was mentioned was occupational health. Here it was stated that the role of social conflict is more or less ignored in Park's textbook. (4) One participants said that Park has formalised what is going on in the medical system. Park's book is in some ways a dictionary from which you cannot understand the dynamics of the disease process in society. In brief, Park is only helping the medical students to pass the examination. (5) In the section on social sciences, sickness is defined as an individual's attempt to escape from the society. The doctor's role is seen as persuading the individual to go back to society. (6) Theory of social science is explained

as definitions of various terms. As any other science, there are various theories in social sciences and they cannot be reduced to mere definition of terms. (7) The book perpetrates the idea of blaming the patient for his/her ill-health.

The content of teaching of pre-clinical sciences was reviewed by the participants. In preclinical teaching almost everything in anatomy, biochemistry etc. are taught without explaining their significance in community health. Everything is given equal emphasis, but actually, in the community we come across more problems of extremities and not of head and neck.

The next question was: What leads to tension between basic science and clinical sciences? Is this tension real?

It was felt that basic sciences should be understood in the context of the problems in the community. For good community health work knowledge of basic sciences is required. Only this will help us to know what type of distortions have taken place in actual practice e.g when we advise people to prepare oral rehydration fluid from the substances available in the community we can know the knowledge of basic sciences is good. Therefore, it was suggested that the tension between basic sciences and clinical sciences is apparent and not real.

The next question was: How are the priority problems being dealt with PSM teaching and textbooks? Some participants pointed out that poverty, inequality, exploitation etc. are priority problems of society. Against this it was argued that since the doctor is involved in health work, the social problems should be explained through the medical priorities in the community. It was suggested that since our integrated as priorities of people and not of doctors. People's education also plays an important role in removing ignorance and that in turn helps in improving health standards. An example of improvement in nutrition status of children through health education of mother was given.

On the point of setting priorities, some participants felt that who sets the priorities is important. If the priorities are set by the people themselves then they may be different from our own concepts of priorities.

Due to lacks of time it was not possible to discuss many other issues. The group did not come out with any recommendations or concrete conclusions as clarification of the issues involved was given importance.

-Amar Jesani.

Group C: Changing the Methodology of Training in Medical Schools:

Change in methodology could be discussed from two stand points. One, with the long term perspective of it being part of a wider movement for alternative structures in all aspects of life; two, critical intervention in the existing medical education in order to accelerate the process of the emergence of socially conscious and concerned health personnel.

The group felt that at present, in the absence of a wider political movement, it was essential to think of ways of intervening in the present system.

Before the discussion on the actual methodology, a few points were made:

- Change in the methodology cannot be seen in isolation from
- *the other aspects of medical education i.e selection of students curriculum etc.

- It was agreed that change in methodology will have to be discussed in the context of Wider social, political and economic forces within the society which maintain the present distortions in medical education. For instance we would have to discuss changes in medical education in the context of changing the whole educational system which deliberately perpetuates a set of values. However, the limitations of doing so was realized by the group and it was agreed to focus the discussion on what could be done to influence the non-going medical education keeping the constraints in view.

An attempt was made by the participants to list the qualities expected in a socially conscious health personnel. He/She should.

- be able to see a patient as a human being rather than a diseased entity.
- have an understanding of the socio-economic-political roots of the disease.
- have an understanding society and its dynamics and be able to initiate change.
- be able to work as a member of a team and assume leadership if necessary.
- be able to function effectively and find solutions to problems with whatever resources available using his/her ingenuity, innovativeness and initiative.
- be able to have an insight into the non-material rewards which are more satisfying in the long run.
- be able to face challenges, frustrations which will be a part of Community Health work and be willing to undergo a certain amount of emotional isolation.
- be equipped with knowledge and skills related to health care, training of other health personnel and basic research.

It was emphasized that we were not trying to train health personnel to fit into the existing health care system rather, it was hoped that the new health personnel would be instrumental in changing the direction and structure of health care system to meet our peoples' needs.

The group felt that at present the health personnel involved with basic health care are given low status due to the general illusion that the skill and knowledge required to perform this function is "basic". In reality, such a health person has to be much more competent and capable than he/her colleagues working in institutions which have an array of infrastructure facilities and support.

The qualities enumerated above, triggered off a discussion on the selection process of the medical student which is inherently based against the emergence of a socially conscious medico.

The pros and cons of selecting students from rural-urban background, age of entry into medical school, blockwise or selection by

Panchayat were discussed. For instance, some participants felt that there should be no upper age limit while some others felt the younger the student, the easier it is to 'mould' him or her. Others felt that the student should enter medical college after they have experienced some social reality. The group moved on to discussing the values inherent in present methodology which prevent students from becoming sensitive to realities.

The present methodology

- perpetuates a hierarchical structure
- actively discourages questioning
- gives the doctor a superiority complex about his/her knowledge.
- discourages innovation and self-learning.

An effective methodology would therefore be one that can counter the above values and inculcate a different set of values into the training programmes.

Some suggestions made by the participants were:

1. Introduce field visits soon after the students are admitted for the programme. In this context the present method of students "looking after" 2-3 families was criticised. The rural internship is too late in the programme. The duration is short, and neither the student nor the teachers are interested to carry out this activity sincerely.
2. Problem-solving methods should be used more often.
3. Participatory method of teaching should become the norm.
4. Some participants felt that the mother tongue should be made the medium of instruction but this point was not discussed any further.
5. The training should be conducted in rural areas, but it was emphasized that it is not enough to merely locate the building in a rural area. Rather, the whole cultural milieu of the medical college/hostel needs to be changed.

A few questions were raised about the role of the teacher since they are the ones who would have a major role to play:

- Is it possible to train the present teachers to use a different methodology?

- If this were not possible where does one find new teachers?

These questions were not resolved. At this point, another question was posed as to where such a training could take place. Should a new institution be set up or should the already available facilities in both Government and voluntary sector be used?

It was felt that the existing voluntary agencies are not readily equipped in terms of knowledge and competence to train medical students. There is very often a contradiction between the ideology that is preached and that actually implemented. The unfortunate thing about voluntary agencies is that having reached a level of complacency, they actively discourage questions regarding their in-competency, incapability and lack of political will. Further they are overburdened with their day to day activities and training of medical graduates will not form a priority with them.

However, it could be worthwhile if voluntary agencies collaborate with medical colleges in imparting a different kind of training to medical students. The exposure to a voluntary agency could start early in student life. A minimum of three months would be necessary. The student should be exposed to voluntary agencies based in both rural and urban areas as well as those operating under different ideological frameworks. The ideological bias inherent in the activities of voluntary agencies might influence the student adversely and therefore the student should be exposed to different voluntary agencies be encouraged to question the activities themselves. The role of the trainer was re-emphasized as this would play an important part in developing the critical faculty of the student. Some participants feared that this exposure might be viewed as an imposition on the students. It was pointed out that the present educational system itself is an importance.

A question was raised as to whether the energies to be focused upon trainers, students or planners. Medical students are often operating under economic constraint but the past experience of working with medical students has shown that even though the students do not take

up community health work, a different exposure helps them to be "better" doctors, (better in terms of rational therapeutics, sensitivity etc.). Teachers who are already thinking differently should be contacted and drawn into a common pool. The innovations they could make would give the necessary feedback for further analysis and innovation. But it was pointed out that in order to effective it is essential that the alternate medical education should be as forceful (based on concrete facts and scientific evidence) as the conventional medical curriculum. This is all the more important as these two divergent types of medical education perpetuating diametrically opposite values are going to exist side-by-side for some time to come.

There were also suggestions regarding the production of 'kits' for medical students and organising distance teaching, (correspondence course) for students.

An important area of the methodology of evaluating the student's performance was not discussed due to lack of time.

TOWARDS A CLINICAL SYLLABUS FOR ALTERNATIVE MEDICAL CURRICULUM

Anant R.S. Phadke

Medical education involves specialized technical training. But that is not all. A medical student simultaneously imbibes certain values - medical education imparts a certain concept about the causes of health - problems in our society, and their remedy, the role of doctors in the remedial strategy. He/She imbibes the values of today's medical profession from his/her daily contact with the teacher : attitude towards poor and rich patients, nurses, drug-companies, social aspects of health etc...etc. By their very nature, these concepts relate to social reality and are not technical questions. An alternative medical curriculum and teaching method should build up alternatives on

all aspects of medical education. The socio-cultural aspect of medical education would have to be dealt with in a separate paper.

The question of the basic purpose of an alternative medical college, of selection of students and teachers, location of training, methodology of training, evaluation, the question of recognition to the product of this college all these questions are also extremely important and they too have to be dealt with in a separate paper. However, here we would concentrate only on the clinical aspect of medical education. The clinical/technical aspect is never purely technical but has social connotations and there is a link in the social function of medical profession and the technical content of medical education. For example, the undue importance to major surgery, heart murmurs etc. and the neglect of minor surgery and subjects like leprosy reflects the social function for which a medical graduate is trained. But here we would deal with social aspects only when they are directly related to the technical content of medical education.

Principles for Clinical Syllabus :-

The syllabus for doctor's technical education should depend upon -

- 1) The health-situation in the country;
- 2) The health-culture and system of delivery of medical-services in that country.

We would assume that we are aiming at formulating a curriculum for doctor's education in a poor, developing country where the system of delivery of health services is being organized on a rational basis.

In rural India, we have the following chain of health-workers : CHV - Multipurpose Workers/Nurse-Health Supervisor - doctor. Simple cold, cough, ordinary diarrhoea, routine MCH work etc. would be taken care of by the paramedic. In urban area also, there should be a layer of very well trained paramedics to take care of such simple problems.

Under these circumstances what would be the principles for formulating a syllabus for a doctor's technical education?

1) There should be a clearcut distinction between those clinical conditions which the basic doctor should be able to +diagnose and manage completely on his/her own, and which conditions he/she should merely suspect at an early stage and refer them to higher level (after giving emergency treatment if indicated.) Without such a distinction, a student is burdened with a lot of unnecessary details about complicated diseases with the result that he/she forgets even those things which must be known to a basic doctor.

2) Which clinical conditions the doctor should manage on his/her own would depend upon -

- (a) how common and serious is the condition.
- (b) whether it be diagnosed and managed without resorting to sophisticated techniques and skill not available at the community centre. For example, details of diagnosis of inguinal hernia should not be taught since herniorrhaphy will not be done by the basic doctor. He/She has just to suspect this disorder and refer the patient to a higher level. However, he/she should know the pre-referral emergency management of a case of obstructed inguinal hernia.

Uncomplicated tuberculosis in children should be taught in detail (unlike today) to enable the basic doctor to manage such cases competently, since this condition does not require sophisticated techniques for diagnosis and management.

- (c) whether a condition is life-threatening and does not require costly equipment to manage it. For example, foreign body in trachea.

3) All the clinical teaching should be directed to the tasks he/she is actually going to perform. Anything not essential to perform these tasks should not be taught. For example : it is not necessary to teach about heart-murmurs beyond how to distinguish between a physiological murmur from an organic one; or how to diagnose and medically manage acute rheumatic heart disease, a fairly common condition in India.

4) All the teaching in preclinical subjects be directly subordinated to the clinical tasks that the doctor is going to perform. Anything which is not directly relevant should be left out. For example, when pharmacology of adrenaline is being taught, only those pharmacological actions which are relevant in clinical practice (use, side effects, toxicity poisoning) should be taught. It is not at all necessary to teach in detail, effects of adrenaline on all systems in the body in an exhaustive manner.

5) Preclinical and clinical subjects be taught simultaneously- one system after another. For example, after a very brief introduction to general features of human anatomy physiology, pathology, pharmacology, students can be taught a system like cardio-respiratory system - its anatomy, physiology, pathology, pharmacology, diagnosis and management - for say 3 months. Thus all the relevant aspects of cardio-respiratory system are to be taught together along with the social aspects of each of the diseases.

6) Learning be combined with responsibilities in work. Dressing and bandaging, minor surgery, management of simple clinical conditions should be done in the manner of sharing the work with the medical staff of the community centre under their guidance.

Based on the above principles, an attempt will be made below to formulate a syllabus for Anatomy/General surgery, to demonstrate by way of example, how the above principles can be integrated in concretely formulating the alternative syllabus. The time required for each topic however has not been worked out.

Instead of listing each and every condition, the category of conditions or sometimes the upper-limit would generally be specified, meaning thereby that all conditions in the same category below that level would be taught. For example "minor surgery upto removal of small cysts, lipomas" would include a host of conditions in this category and below.

Anatomy and General Surgery

Following conditions should be managed by the basic doctor completely on his/her own without referring to higher level -

Wounds

- Management of wounds except when
 - nerves and tendons are damaged
 - vessels are injured to such an extent that the organ is jeopardized.
 - blunt or penetrating injury to abdomen and chest leading to internal haemorrhage.

Radial, ulnar, median, femoral nerves are most commonly damaged and hence the anatomy of these nerves should be taught to the extent that the doctor should be able to diagnose injuries to these nerves and refer the patient immediately to a higher level. Similarly tendons around the wrist, and tendoachillis should be taught with special emphasis.

Traumas and Burns

Head injuries except those with intracranial bleeding.

Minor Burns

All cases of injuries leading to damage to internal organ (rupture of urethra) or internal haemorrhage and all cases of major burns requiring plasma transfusion should be referred after giving pre-referral treatment if any. Similarly all cases of fractures except Colles', clavicle, crack-fractures, should be referred to a higher level. Compound fractures and fractures involving injuries to nerves and vessels should be referred as mentioned above.

Surgical Conditions:

(A few illustrative examples)

- cysts, ulcers, carbuncle, abscesses, swellings like lipoma, minor surgery of the hand.
- However, no surgery in the neck and Axilla especially TB Nodes.

Local Anaesthesia/Anal Gesia in Minor Surgery

- piles, fissure in ano
- conservative management of cholecystitis, cholelithiasis,
- renal and ureteric calculi - (to be taught in medicine?)
- Pre-reveral management of acute abdomen.
- bladder stone.
- vasectomy, phimosis, meatal stenosis, detection of congenital dislocation of hip-joint, CTEV (to be referred promptly) - fracture ribs, pneumothorax, emphysema.

Certain Procedures

- Giving pentothal anaesthesia and doing intubation to conduct short, simple procedures like D & C in Gynaecology; reduction of Colleses Fracture.
- Cardio Respiratory Resuscitation.
- Management of Air-way in unconscious patient
- Emergency tracheostomy
- Heimlich Manoeuvre
- Venesection, catheterization

All the conditions mentioned above should be taught thoroughly. All other conditions should be taught only to the extent to enable the doctor to suspect the case early, and to refer it to a higher level.

In teaching anatomy, application should be the overriding consideration. Gray's Anatomy should only be used as a reference book and not as text book. The book by Last dissection but should be given dissected body to get a three dimensional view of human body. Students

would be expected to learn functional anatomy. Thus it is not necessary to know attachments of each of the various muscles to different parts of bones, or details of relations of various muscles to different parts of bones, or details of relations of various anatomical parts unless this is going to be directly useful to the kinds of tasks he/she would be actually doing.

A student taught in such a manner would be more competent to deal with the problems faced at a Primary Health Centre or in General Practice than the product of the existing medical teaching. We are not aiming at a second-rate doctor, but an appropriately trained doctor with minimum expenditure of time and other resources.

(This is a slightly modified and abridged version of a note I had prepared a few years back, on the basis of discussions I had with friends in Medico-Friend Circle and other medicos. Though I have been selective about suggestions made by others, this note is basically a product of collective work - Anant Phadke.)



He is waiting for the press photographers and reporters—this emergency operation, he says, is going to be an unique

INTEGRATION OF 'TRADITIONAL' MEDICINE WITH 'MODERN' MEDICINE IN AN ALTERNATIVE CURRICULUM

Dhruv Mankad

Introduction

Human beings since the dawn of their history have been using various vegetable, animal and mineral matter from the immediate surroundings to treat the sick members of their species. The empirical knowledge gained over centuries of using such medicines, evolved within each cultural and geographical set up into a logical set of coherent concepts e.g. Ayurveda in India, Greek medicine in the dark ages of Europe, Unani medicine in the Arabic world, each having been influenced by the others to a greater or lesser extent. Thus these

'traditional' medical systems represent historically specific stages in the development of 'Modern' medicine. They combine the advantages of cultural acceptance, decentralisation and local resources utilisation.

Modern medicine which evolved under the specific historical conditions of Europe, came to the third world countries with their respective colonisers during the nineteenth century. It embodies the then newly emerging values of positive sciences empiricity, secularity and rationality. It also brought with it scientific testing and experimenting techniques and revolutionised the understanding of diseases in the colonies. At the same time, it bore on it the stamp of the politics of imperialism. All efforts were made to suppress the practice of traditional medicine, first of all by impoverishing the people so that 'they were unable to maintain the health services, which they had developed as a component of their overall way of life'. (1) Other more direct methods were also used. In China for example, the 'pro-Western' Nationalist government put forward measures to abolish Chinese medicine which included restricting its practice, a ban on setting up schools of traditional medicine and a ban on publishing literature. (2) All this was done, unlike the European countries, without the welfare measures of extending health services to all people. The vacuum thus created was filled by faith-healers, sorcerers, and quacks who made money from the sufferings of the people.

In the post independence period despite extension of health services and some achievements in improving the health status of the people, these countries have not seen major changes in practice so far as traditional medicine is concerned. Even though, many Ayurvedic and Siddha medical colleges and research institutions have been set up in India, they continue to receive a step-motherly treatment from the state as well as the 'modern' medical elite. Even the doctors trained by these colleges get co-opted in the generally exploitative, multinational dominated 'modern' medical system. A lack of an organic synthesis of the 'traditional' and 'modern' medicine in the service of the people, has resulted in the people being exploited on the one hand by charlatans and sorcerers and on the other, by the 'modern' elite doctors.

They are denied their rightful participation in caring for their own health and that of the community.

Organic Synthesis of the 'Traditional' and the 'Modern'

Now, the question remains: what constitutes 'organic synthesis' or 'integration' and how to achieve it in the framework of an alternative medical school.

They exists among those who uphold the idea of integration of various 'pathies', a diverse understanding of the concept of integration. They are :

1. Each of the medical sciences, the traditional as well as modern are culturally specific closed entities having its own internal logic and method of obtaining knowledge and therefore are incomparable. Any criticism made must be based on its own internal logic. For example, Ayurvedic concepts and practices cannot be critically examined on the basis of the view of modern knowledge of pathology and pharmacology. This liberal view allows a non-integrated juxtaposition under the name of integration of all the various therapies existing with the result that people continue being exploited both by 'modern' and 'traditional' quacks.
2. A second view holds that 'modern' medicine has grown out of the traditional medicine and has developed its concepts and methodology after a conscious critical examination of all the other medical systems existing. Therefore, if at all, modern medicine has to integrate only these therapies and drugs which can be verified by its own methodology. By implication it means that it considers the concepts and the methodology of modern science as complete and non-changing entities.
3. A radical view of integration holds that science itself is developing and so are the concepts and the methods of science. Having evolved under different historical conditions traditional and modern medicine embody different sets of strong points and limitations. Integrating traditional and western medicine and pharmacology does not mean simply adding the one to the other. "What is meant is the organic

combination of the two filling in the weaknesses of the one with the strong points of the other and raising the level of both, eventually evolving a new medical science incorporating the best features of both". (3) This implies that even the concepts and methodology of both the systems would have to change depending upon the scientific evidence obtained from social practice. One could look at the Chinese experiments in integration to find out what the above view means in practice. The Western style orthopaedists' principles for treatment of fracture are extensive immobilisation and complete rest. They stress the role of external means in achieving total anatomical alignment and immobilisation but overlook the role that movements and surrounding soft tissues play in aligning the broken bones and immobilising them enough to promote healing. The traditional bone setter advocated combined movement with quiescence but they did not have access to modern diagnostic and anaesthetic procedures. There were no standard methods of external immobilization nor did they have the modern knowledge of post fracture pathological changes. Combining the best of the two, the Chinese doctors have developed a qualitatively different method of fracture treatment, better than either the modern or the traditional one. It consists of X-Ray diagnosis followed by reduction under anaesthesia. The fracture is then immobilised using appropriate splints from a standardised set of splints, but the joints above and below are left free to do standard exercises developed for that particular type of fracture. This has resulted in marked speeding up of healing and a satisfactory return of function, even in the case of fractures of lower limb (4).

Organic Synthesis in Practice

- a) A team of doctors comprising of the practitioners of traditional and modern medicine, who are open to the various theories and practices of one another and are willing to learn to put them into practice, should run such a hospital.
- b) Such a team should diagnose and treat various illnesses, judiciously combining the techniques used in both types of medicine. Once again to illustrate this point, we turn to the Chinese experience. In case of

acute abdomen, the diagnosis regarding the condition is made using modern techniques but as in the case of perforated peptic ulcer, decision whether to operate or not is taken on the basis of the amount of exudate, size of perforation etc., which are diagnosed using the traditional techniques. The patients not to be operated are further treated conservatively using antibiotics, fluids, acupuncture and herbal medicines. In case, there is a lot of exudation or the condition worsens, the patient is promptly operated upon (5).

c) Joint clinical research should be conducted at the hospital level in determining the scientific basis of any of the traditional therapies. An example of such a research is found in a study conducted on the non-surgical treatment of extradural haematoma using Chinese herbal medicine. In this experiment, nine patients of extradural haematoma without any signs of active intracranial haemorrhage or herniation of brain were selected. The haematomas were diagnosed using modern techniques - X-Ray, angiograms etc. The symptoms were interpreted in terms of the traditional concepts and medicines were prepared as per the traditional Chinese material medica. It was found that in all the nine cases treated, the haematomas resolved without any surgery (6).

Change in the Curriculum

In order that this integrated approach is learnt by the student-doctor in an alternative medical school the curriculum should expose the students to combined practice of traditional and modern medicine. Some of these changes can be stated as:

- a) The student should be acquainted with the basic concepts of the traditional medicine and should learn the elementary principles of traditional diagnostics and therapeutics by participating in demonstrations of such techniques and by using them in one's clinical apprenticeship.
- b) Vacation courses in traditional medicine and various other 'pathies' (homeopathy, acupuncture, acupressure, yoga etc.) should be held to encourage the student to study at least one other form of medical system, so that he or she develops critical insight into both the

modern, and the traditional or other non-modern systems and in future, is able to develop both the types of systems.

c) Courses in modern medicine for the traditional and other non-modern practitioners should be made available in the school. Similarly, courses in traditional medicine for modern doctors should also be formulated to encourage further training of the two types of practitioners, in the integrated approach.

Advantages of an 'Integrated' Medicine

4. Such an integration offers several advantages over the isolated practice of either the modern or the traditional medicine. Although it is too early to judge the long term results of the Chinese experiment in the matter of the integration of the traditional and the modern medicine, some benefits are quite evident.

a) The treatment with traditional medicine is relatively cheap and easy to use "... there is no doubt that some (e.g. acupuncture) are effective. Expensive equipment is not necessary to administer them. Herbal medicines are readily available and are relatively free from the side effects of western drugs" (7).

b) Integrating the large number of traditional practitioners into the health services of the area provides the manpower required for the much needed extension of community health services in the third world countries.

c) Traditional medicine makes available treatment which is culturally more acceptable to the people particularly those in the rural area. People generally interpret the disease and its treatment in the terms of the concepts used by traditional medicine e.g. increase of 'heat' in the body and drugs to 'cool' it instead of allergy and antihistamines, arthritis is understood as 'vata' (wind) in India. The combined use of modern and traditional medicine makes the treatment more acceptable.

The implication of the above points would be understood better in the light of a survey conducted in an Indian rural community in 1977 which showed that a total of 79% of all the sick people depended

upon traditional forms of healing (64% on the local healer and 15% on home treatment) and only 16.6% had access to modern treatment (8).

d) The drugs can be prepared locally from relatively easily available resources. It is generally seen that the diseases that are widely prevalent over a particular geographical area also finds its treatment from herbs available widely in the same area. A herbal garden must become a part of the activity of the alternative medical school. Also, a survey of medicinal herbs available in its immediate surroundings must also be an exercise worth taking up for the student-doctor.

PROBLEM AREAS :

All this is easier said than done, for such an experiment poses several problems which must be resolved. We would be dealing with a 'science' which has gone through many distortions and is so decentralised that there is no standardisation of techniques and medicines whatsoever. These are the problem areas which would need further theoretical and practical exploration before any integration is possible to achieve.

1. Ayurveda, the Indian traditional medical science literally, science of life - has over the centuries, become a strange, illogical mish mash of science and metaphysics, facts and myths, experiments and rituals. Indian scientists in the past have had to make very heavy compromises to save their work from being destroyed by those denying any direct knowledge of nature to be the truly valid knowledge. (Science and Society in Ancient India, D.P. Chattopadhyay, People's Publishing House, Bombay) To come to grips with the 'scientific' concepts embodied therein strenuous efforts will have to be made.

2. Many of the traditional practitioners - some of them quite successful - are spiritualists and charlatans, claiming possession of secret prescriptions of divine origin for curing a certain disease. Many traditional practitioners are found to be using modern drugs like steroids. As with the body of knowledge of traditional medicine, so with the possessors of such a knowledge, the chaff will have to be separated from the grain.

3. Many of the traditional practitioners and modern doctors are so dogmatic about the superiority of 'their' medicine that they are not prepared to look with an unbiased mind at the results obtained with the others knowledge and skills. To gather a team of modern and traditional doctors with an open outlook would be a difficult task.

4. As mentioned above, different practitioners employ different methods, making any standardisation almost impossible. A careful analysis of results using various methods would have to be carried out to bring about such standardisation.

5. Clinical efficacy of many herbal medicines is known at the moment only through the subjective experience. Clinical studies will have to be carried out using combined modern and traditional diagnostic and therapeutic techniques.

6. Many times the mode of action of a traditional medicine eludes the researchers. New approaches will have to be thought of. One such approach can be the study of drug action at a molecular level. Plant extracts and active constituents should be "studied for their effects on enzymes, RNA and DNA synthesis, membrane transport etc." (9).

In conclusion it can be said that serious efforts on the part of modern doctor to understand the scientific basis behind the empirical knowledge obtained through centuries of practice - what is called the traditional medicine and willingness on the part of traditional practitioners to imbibe the tremendous strides achieved in the knowledge of our bodies and the diseases over the last century, in short 'making the past serve the present', can achieve a true synthesis richer in content and higher in theory, in the form of people's medicine. @End =

INNOVATIVE PROGRAMMES IN MEDICAL EDUCATION: THREE CASE STUDIES

Compiled by C. Sathyamala

I. Institute of Medicine, Tribhuvan

a) Rationale

Earlier to the establishment of the medical school, the students from Nepal were being sent to other countries for their undergraduate medical education. Many of the students thus trained never returned to Nepal after their graduation. Those who did return, found it difficult to cope with the reality existing in Nepal, for which they had not been specifically prepared. Further, as these doctors had been trained in different countries under varying conditions, there was no unifor-

MEDICAL EDUCATION RE-EXAMINED

mity in the content to the education they and received which affected their functioning as a team in the national health service. Hence, the training of students outside of Nepal was considered inadequate both in terms of knowledge and skills for the needs of the country. This combined with the fact that Nepal had insufficient number of doctors to meet the requirements for the health care system, made it necessary for the country to open its own school of Medicine. Since this decision was taken only in the mid-seventies, the debate on medical education in the International scene influenced the shaping of the curriculum and made it easier to formulate a progressive educational system, designed to meet the social needs of Nepal.

The Institute of Medicine admitted the first batch of students for undergraduate medical education in 1978.

b) Role and Objectives

The objective is to produce a person with adequate skill, knowledge and attitude to function in all types of environment existing in Nepal. The biggest hospital in Nepal has only 300 beds. Working conditions in the district hospitals are far below the standard of PHCs in India. Most of these health centres are expected to remain in poor standard for another 10-15 years. Health problems vary from malnutrition, communicable diseases, respiratory problems to high fertility rate. As the region is hilly, and transportation poor, patients cannot be transferred from one centre to another, in other words, referral system does not exist.

A doctor working in these circumstances, has to have adequate knowledge to handle all these problems and skills to take appropriate measures to save life, be it obstetric or surgical emergencies. Most of all, the doctor needs to have the necessary attitude to work under such difficult conditions.

The basic role envisaged for the physician is to render secondary care at the 15-50 bedded district hospital. Broadly, the doctor is expected to

INNOVATIVE PROGRAMMES

- institute life saving measures (eg. relieve obstructed labour, perform simple surgery, give anaesthesia, and deal with medical emergencies)
- recognize his/her limitations and refer patients to appropriate authority
- organize preventive health services through the district health officer.
- Supervise the work in the health posts.
- educate and train the paraprofessionals and auxiliaries attached to the health teams within the districts.

c) Criteria for the selection of the student.

Entry into the medical college is open only to the middle level workers already functioning as part of the health care system i.e Health assistants, Staff Nurses, lab. Technicians, Radiographers, Pharmacy Technicians, Ayurveds. The only pre-requisite is that the applicant should have completed a minimum of three years service in health field as a trained worker.

d) Structure of the training

Medical education in Nepal forms part of a system in which the student enters the institute after school leaving certificate and undergoes a basic paramedical training. After graduation, the graduate is sent to a health post or hospital to work as middle level worker. From this group, anyone desirous of joining the medical college, can do so after three years of service.

This two-tier plan was seen to have an added advantage as it would attract the 'best' students thereby improving the quality of all levels of workers in the health care system.

University Certificate Course

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School leaving certificate	General		
	Medicine 2 & half yrs	3 yrs	4 yrs
	Pharmacy 2 & half yrs	service	MBBS
	Laboratory	in	
	Technician "	health	
	Radiography "	field I	
	Ayurved 3 yrs		
	Nursing* 3 + (1)		

* The basic nursing course is of three years duration but if a nurse intends to enter into medical undergraduate programme she has to complete a further one year of basic science course.

The four year curriculum is divided into 3 phases :

- Phase I - (1 half years) : Community Medicine for 5 months
: Study of basic science subjects coordinated on system basis
- Phase II - (1 half years) : Theoretical and practical background in patient management skills
: Community Medicine (epidemiology)
- Phase III - (1 year) : Learning to manage a district hospital (5 months)
: Development of Clinical Skills

e) Methodology of teaching

The course begins with the theoretical teaching of Community Medicine at the campus. At the end of this programme, a period of 5-6 weeks is spent by the students with their supervisor in rural areas for doing health related surveys. Problems thus identified form the basis of some of the corrective measures the student may undertake to implement during the course in future.

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The programme for the study of basic science subjects is coordinated on system basis. The course begins with intensive topographical study of anatomy for two weeks followed by systems. In each system, the student correlates the structure (anatomy), and the function (physiology), studies the pathophysiology on the patient by taking history and doing clinical examination. Emphasis is laid on the common problems prevalent in Nepal. In all areas, study of controversial or unproven theories are avoided as far as possible. At the end of each system the students try to solve some clinical problems presented on the basis of the study of anatomy, physiology, pathology and pharmacology.

During the system study, time is spent both in the campus and in the hospital to correlate the basic sciences with clinical science. Students also visit the homes of chronically ill patients and study the family to identify the socio-economic-cultural-environmental factors which may have a bearing on the disease and its outcome. Hospital management is taught in district hospitals.

f) Nature and set up of training centres

The Institute does not have a hospital of its own. The clinical teaching is therefore done in the hospitals belonging to the Ministry of Health. The programme now in its final year is using all the available hospitals in Kathmandu valley for teaching purposes.

5-6 weeks of the initial part of the first phase is spent in rural health posts.

5 months of the third phase is spent in district hospitals (which have purposely not been upgraded into teaching hospitals as they are used for situational learning) outside Kathmandu valley.

g) Faculty

Experienced and motivated teachers were not available in the field of Community Medicine. Since there was a strong emphasis on Community Medicine and as it was introduced right from the beginning, the programme had to be run with young and inexperienced faculty.

75% of the senior consultants in the hospitals selected for teaching purposes are helping the Institute as part-time visiting professors.

h) Difficulties encountered

- - Lack of the right kind of staff members especially in the field of basic sciences
- - Inability of the staff members to conceptualize the decompartmentalization of the different disciplines
- - Lack of innovative teaching methods and equipment, more suitable for this innovative education
- - Lack of teaching hospital facility

II. The Institute of Health Sciences, Tacloban University of Philippines

a) Rationale

In the Philippines, it normally takes nine years for a standard medical school to produce a physician. In addition the product of the medical schools are generally disinclined to serve in the rural communities. Medical schools have rigid entrance requirements and the competition for places in the college is intense. The selection mechanism therefore tends to favour those who come from the privileged sector of the national community. Due to their dependence on sophisticated medical technology the standard medical training also makes the graduate unfit for rural practice.

Therefore a need was felt to health personnel who would be competent and desirous of working with rural communities.

The Institute of Health Sciences was set up in 1976 as an experimental school to train health personnel to fulfill this need. The three broad objective of this Institute are:

- to produce a broad range of health manpower to serve the depressed and underserved communities in an Eastern region of Philippines;
- to design and test programme models for health manpower

development that would be replicable in other parts of the country;

- to monitor the development of rural communities in relation to the effectiveness of the health care system operating in these communities

b) Role

The student is expected to return to his/her community and function as a community health worker. He/She is expected to plan, implement, evaluate health programmes with the active participation of the community; provide leadership and organize the community towards better health.

c) Criteria for Selection of Students

There is no entrance examination. The admission policy is based on the assumption that a person recruited from the depressed and underserved area and trained for the necessary health and community organization skills would become a health worker to rural community service.

The students are recruited primarily from communities which are badly in need of health workers. The first step is the identification of target barangays (communities) in the selection process. Indicators used are:-

- the availability of health personnel
- mortality and morbidity rate
- peace and order situation
- economic status

The students for these target barangays are nominated by their communities in an open village meetings. As regards the nominees the Institute requires that he/she should be a high school graduate no more than two years out of school, a resident of the barangay for at least one year, and willing to return to the barangay after training.

Upon nomination, the student with the consent of his parents, pledges to return to the community to render service as a health

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worker. This pledge operates as a type of social contract and is entered into by the student and the community. The community in turn pledges to provide a measure of support to the student while at the Institute. This support includes transportation, medical kits and participation in the health programme the student will set up upon his return to the community. This pledge or resolution is to be signed by at least 70% of the households.

The final criteria for admission is based on a weightage system in the following way:

Community of origin	- 50%
Barangay council endorsement	- 20%
Training selected	programme
Midwifery	- 20%
Nursing	- 20%
BSCH	- 5%
MD	- 5%
Motivation	- 5%
Aptitude	- 5%

d) Structure of the training

Unlike the traditional medical schools, the institute is not concerned with the training of physicians alone. Its curriculum has a ladder type of a course, with various points of entry and exit.

Students admitted to the programme initially go through a paramedical training known as the Barangay Health Workers programme. This lasts for eleven weeks (or one quarter). After this, the students return to their barangays where they perform activities that require them to apply the knowledge and skills they have learned. This service leave, as it is called, lasts for three months. The student is provided with a checklist of activities which includes assessment of the health needs of community planning, Nutrition, Environmental Sanitation, MCH, Control of Communicable Diseases, treatment of common illnesses, First Aid and Emergency care.

If the student satisfactorily performs his tasks and if he is endorsed by

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his community again, he returns to the Institute to follow the next programme, the community health workers programme. It lasts for 55 weeks (5 quarters) and the contents are in part determined by the Philippine Government's rule pertaining to midwifery curriculum and also by the fact that passing the Government's board examination is a pre-requisite of the practice of midwifery. Students after completing the Community Health workers programme once again return to their respective communities for their second service leave. Students who perform satisfactorily during the second service leave return to the Institute for their midwifery board examination. At this point some students are selected to enter the Community Health nursing programme, while others are required to stay at the level of community health workers. The decision as to whether the student shall follow the Community Health nursing programme depends upon a number of factors, the most important of which is the need of the community is badly in need of a health worker, the student is required to remain in the community.

The ladder type curriculum of the
Institute of Health Science

(1 quarter + 11 weeks)

Doctor of Medicine

Doctor of Medicine Programme (12 quarters)
with alternating service leave

Service Leave

Bachelor of Science in rural Medicine
Programme (2 Quarters)

Service leave

Community Health Nursing Programme
(4 quarters)

Service Leave

Community Health Worker Programme
(5 quarters)

Service Leave

Barangay Health Worker Programme
(1 quarter)

The community Health Nursing programme covers four additional quarters of study towards the bachelor of Science in rural medicine. The person who comes out of this programme successfully is allowed to join the 2 years medical education (MD) programme.

During the service, leave a faculty member visits the community where the student is placed to support and strengthen the link between him and the community.

e) Methodology of teaching

The faculty uses lecture-cum-demonstration and group dynamics as basic teaching methods. Individual reporting is not used because of the low reading comprehension of the students and their difficulty with the English language. Participative learning in taking care of patients is reinforced by case presentation and case study. Weekly ward classes are held after each clinical experience. Application of theory is learnt during their service leave which is part of the field experience. There is a strong emphasis on the community organization and the student is given practical knowledge and skills to understand and help the community.

Faculty members are required to indicate exactly in which aspects of the course the student is deficient. The tutorial scheme is provided for individual tuition for students lagging behind.

f) Assessment of the students

There is no standard grading system that awards numerical equivalents to the quality of students' performance. In the course a student is rated in terms of whether he has reached the minimum acceptable level or needs more instruction in certain branches.

During the service leave the student is assessed by the rural health unit (RHU) the community and the Municipal Development Officer. Evaluation forms are provided for each student. This includes checklist of activities, attitudinal evaluation scale, anecdotal report and clinical performance rating scale. The results of the evaluation are discussed in the barangay assembly meeting, the minutes of which are

accompanied by the names and signatures of all registered members of the barangay assembly who attended the public meeting. The students are also asked to do a self-evaluation based on competency levels and commitment to their communities.

The final evaluation is made on the basis of feed back from the RHU, community, Municipal Development Officer and the students.

g) Difficulties encountered

- Students in the initial entry all had the impression that, provided that they maintained good academic records, they would eventually follow the MD course. It therefore became difficult for the Institute to leave some students out of the programme on the strength of their being needed by the community.
- The age range of the first batch of students ran from 17 to 28 years and some of the older students had previous college experience that placed them ahead of the younger ones in academic competence and maturity of outlook. This heterogeneity made it very difficult for teachers to adjust their perspective and teaching strategy.
- Even though the Institute wished to create a programme that was specially tailored to the needs of the rural communities, it could not disregard the existing governmental regulations (e.g. the student has to pass Government board examination prior to practising midwifery)
- Since majority of the pioneer faculty came from the college of nursing, the nursing orientation was used in teaching of midwifery courses.

III. The University of New Castle, New South Wales Australia.

a) Rationale

The Australian health care system is based on compulsory health insurance scheme subsidized by the Government. In recent years, with the escalating cost of health care, the Government has been forced to

spend a larger proportion of its gross national product on medical care.

The decision to start a new medical school was taken in 1973 although it materialized only by 1978. In these 5 years, apart from the decline in Australian economy as a whole, two other factors led to the questioning of the wisdom of starting a new medical school. The doctor-population ratio, for a variety of reasons, has increased more than was predicated and there was a growing awareness that the maintenance of doctors was the expensive part of the health care system.

In this semi-hostile atmosphere, the decision to admit the first batch of students was made, and in order to justify the cost, the training had to be all the country's need.

b) Objectives

The faculty has developed 45 programme objectives.

Certain commonly neglected aspects of medical education especially those related to attitude of the emerging physician has been given equal importance as that of specific clinical skills.

c) Criteria for selection of students

The formulation of the policy on student selection was jointly decided by the faculty and a group of community representatives. The representatives consisted of the mayor of the city, a senior trade unionist, a business executive, a social worker and two medical practitioners, three of three six community representatives were women. The final policy decision was that:

- half of the available places will be filled on the basis of academic achievement alone
- the remaining half on a number of personal and intellectual characteristics one of which would certainly be a reasonable level of past academic performance.

d) Methodology and structure of the training

The entire educational programme is constructed, from the beginning around the process of clinical problem solving. From the first term of the first year, the student is involved with real, live clinical problems which he will be required to understand and manage, at an increasing level of complexity as the course progresses. The learning in 'basic sciences' will be derived from the study of these problems. The clinical problems themselves have been selected after a close study of detailed Australian epidemiological data.

An example of such a problem is pain in the chest. Learning will include the biochemistry of cardiac muscle, the physiology of pain, the anatomy of the blood and nerve supply to the heart, risk factors, epidemiology and prevention, physical examination, appropriate investigation, management of the patient, coping with the relatives, effects on the family, and community care and rehabilitation.

Thus the basic science will not be learned as separate disciplines but will be studied and applied in a clinical context from the first to the last day. (However, it has not been possible to intergrade the learning of basic communication and clinical skills into this method of learning).

The five year curriculum is divided into four phases:

- | | | |
|-----------|---|--|
| Phase I | — | (10 weeks) introduction to curriculum and problem solving |
| Phase II | — | (3 years) Problems of the adult, system by system at first and ending with multi system problems |
| Phase III | — | (1 year) Problems of the newborn, children, adolescents and the aged |
| Phase IV | — | (1 year) A form of internship. The student will undertake increasing responsibility for the management of patients of all ages, both in hospital and in the community. |

The initial emphasis is on practical experience and analysis of human behaviour in the student group, before moving on to interaction with

strangers and then with patients. Tutors for these small group activities include local practitioners and other health professionals.

e) Nature of training set-up

The students receive a substantial part of their education in the local community i.e. in general practitioners, OPDs, Community Health Centres, and other health and welfare agencies.

f) Assessment of students

Two types of assessments are made. First informal assessment occurs during learning so that students can monitor their own progress. The second type is done towards the end of each 10 week term and is to assess the students' fitness to proceed to next stage. The results are not made on pass/fail basis but on whether the student has reached the requisite standard or not. The students are given complete feedback on the assessment in order to help them undertake remedial work before reassessment.

g) Faculty

An educator, a behavioural scientist and a professor of community Medicine were appointed first. A professor of Clinical Pharmacology and Psychiatry were then recruited and at a comparatively early stage in advancement of the recruitment, in Paediatrics, Obstetrics and Gynaecology and Surgery.

Conclusion

In all these three cases, the educational programmes are aiming at producing health personnel better equipped in terms of attitude, skills and knowledge to respond to the needs of the particular country. They are innovative in terms of the criteria used for selection of students and in terms of content and methodology of training. Philippines and Nepal are attempting to make medical education an integral part of the overall education of health personnel. Philippines is one step ahead by making the community the "ultimately beneficiary" and not the individual student alone.

However, there are certain contradictions which need to be explored more. The career-oriented ladder-type of curriculum could become its own nemesis. The students joining this type of educational programmes generally are interested in reaching the highest rung. It also seems contradictory to find a country like Philippines with its oppressive Government to have apparently the most politicised medical education and produce health workers whose main function is to mobilise the community. Finally, the students trained in these progressive schools would still have to go out into the world where "free" market forces still dominate.

Health services and systems of education must be organised for the good of the people and not to meet the personal needs of a certain cadre of doctors for material gain or scientific satisfaction.

— Carl Taylor, 1970.

AN ANTHOLOGY OF IDEAS

The Framework of an Alternative

Compiled by Ravi Narayan

[This document is based primarily on the discussions at Anand (Gujarat) and Calcutta (West Bengal) in 1983 and 1984 respectively (reports appear elsewhere in the anthology) and includes ideas also explored in the reflections. It must be read in the context of and supplemented by the rest of the anthology.

In keeping with the participatory and democratic traditions of mfc we have attempted to evolve a consensus on many issues. Where this was not possible, the divergent opinions which emerged have been included. Any groups using this document will have to make their own decision in aspects where alternate viewpoints are mentioned.]

1) Preamble

- 1.1. These recommendations on an alternative curriculum are designed for a 'model' or 'alternate medical college' that is seriously committing itself to producing a *Community Oriented socially conscious, Primary Health Care provider*, who would be competent to plan and implement health care services to meet the needs of the total population of a defined geographical area.
- 1.2. Since the 'alternative doctor' can function most effectively only in an 'alternative health care system' which is a product of an 'alternative social system', neither of which exist at present, it is important that this alternative curriculum should not create health personnel to fit into the existing health system but be instrumental and skilled in changing the direction and structure of health care to meet our people's needs.
- 1.3. The medical college attempting such an experiment should not enter into competition with other existing colleges of the 'conventional' type nor strive for recognition in terms of future post graduation study, super-specialisation and so on. This may lead to compromising the spirit of the endeavour.
- 1.4. Even though many of the objectives, course, contents, methodology, the nature of the college set up and other aspects in our recommendations may seem similar to existing 'conventional colleges', the management and faculty of the alternative college must be clear of the perspective and qualitative differences in all aspects of the organisation of such a college.
- 1.5. The conventional medical education is the product of

- both a conventional educational perspective as well as a conventional understanding of medicine and health and the role of a doctor. An alternative community oriented perspective on health/medicine and the role of a doctor by its very nature will demand changes in all aspects of the conventional curriculum and organisation. An ability to critically evaluate the existing structure and content and an openness and flexibility to evolve/experiment with alternative approaches has to be a crucial part of the alternative experiment.
- 1.6. The community oriented, Primary Health Care doctor is by no means a 'basic', second rate, or low-skill doctor as is made out by the protagonists of the conventional curriculum. She/He needs greater competence and capability to work in the community and has to develop multidisciplinary skills, knowledge and attitudes far beyond conventional medical boundaries. Her/His specialist colleague, while certainly being necessary for delivering highly technical medical services has the disadvantage that she/he can function only at secondary and tertiary levels with an array of infrastructural and technological and senior peer group support. But in the present system she/he is at best a glorified technician. This shift of emphasis is basic to the development of the community oriented doctor.
 - 1.7. The social context in which the community oriented, Primary Health Care provider will be located has always been a controversial issue in the context of the nature of health care delivery today. She/He could be trained to be one or more of these alternatives.
 - 1) A team member of a health/development voluntary agency (NGO) group working for people's health.

- 2) A team member of the existing governmental primary health care system.
- 3) An individual community physician competent to practice and provide comprehensive health care with a suitable team.

The medical college embarking on such an alternative curriculum has to decide this issue for itself and gear all aspects of planning and training to the specific role model/s and social context identified/selected.

- 1.8. The alternate curriculum should be evolved/based on concrete facts, well planned reform, scientific evidence and meticulous documentation of both content and process. It will have to exist side by side with the existing conventional medical curriculum for some time to come before it can establish its superiority in terms of promoting skills, knowledge and attitudes for community health action. Changes from the conventional curriculum must therefore be made with courage, tempered with flexibility and creativity.

2) The Objectives Of Education

The curriculum must ensure that the student of the course should at the end of the training -

- 2.1. be able to analyse social/societal/community realities and social processes and able to participate in change.
- 2.2. be able to make a comprehensive community diagnosis of health, understanding the socio-economic-cultural-political roots of disease.
- 2.3. be able to plan and execute comprehensive health programmes for a defined population.

- 2.4. be able to use clinical and preventive skills to meet the needs of the people and to manage effectively all the more common diseases and health problems.
- 2.5. have developed managerial skills and ability to plan and integrate various programmes.
- 2.6. be equipped with knowledge and skills related to health care training and supportive supervision of health team personnel.
- 2.7. be able to train and supportively supervise community health volunteers.
- 2.8. be able to plan and execute 'education for health' programmes for the public/community on health problems and health issues.
- 2.9. be able to identify areas of relevant field research and carry out such simple community based research projects.
- 2.10. be able to constantly upgrade and improve her/his knowledge and skills through continuing self education.
- 2.11. be able to function effectively and find solutions to problems with whatever resources available, using her/his ingenuity, innovativeness and initiative.
- 2.12. be able to work and participate in a health / development team de-emphasising his/her role as a leader from the top.
- 2.13. be able to face challenge and frustrations which will be part of community health work and be willing to undergo a certain amount of professional/social isolation.

- 2.14. be able to have an insight into non-material rewards which are more satisfying in the long run.
- 2.15. be able to have internalised the multidisciplinary nature of health problems and the collective/societal nature of their solutions.

3) Admission Criteria And Selection Of Students

- 3.1. Students should be selected and sponsored by a group committed to providing Primary Health Care / Community Health Care to an under privileged region of the country.
- 3.2. The selection/sponsorship should be along guidelines provided by the alternate medical college. The final screening and selection should be done by the college itself.
- 3.3. Minimal formal educational qualification should be final schooling.
- 3.4. Age should not be a barrier. There should not be an upper age limit. (A younger student may be easier to mould towards a new direction but an older may have experienced greater social reality which is equally crucial to the new direction as well)
- 3.5. All students should have experienced work in a community situation.
- 3.6. Motivation is difficult to assess but methods must be evolved and experimented with.
- 3.7. Social criteria like socio-political and socio-cultural perspectives and attitudes for new role should be examined and given due consideration.

- 3.8. Selection of competent paramedical workers like ANMs, Community Health workers etc., should also be considered.
- 3.9. No criteria should be absolutised and all the criteria should be taken together in totality allowing a flexible approach. The selected criteria will have to be constantly reviewed, modified or increased depending on student motivation and performance.

4) Duration of Course

The conventional medical course consists of 9 semesters of teaching (9/2 years) and one year of compulsory rotating internship. This has not arrived at out of any logical evaluation of course content, time required to develop skills etc., but has the weight of tradition behind it.

The alternative curriculum if integrated well, need not take long but it is important for the students to develop adequate community level skills through regular field exposure. This requires adequate time.

- 4.1. For the present, the duration planned for the course may be the same as the conventional course, to be reviewed regularly.

5) Medical Curriculum - Overall Design

- 5.1. Following a course in basic sciences (anatomy, physiology, biochemistry, biophysics) geared to an integrated understanding of human biology and healthy functioning of the human body, the rest of the entire course should be an integrated systemwise and problemwise teaching with an early exposure to health problems as encountered in the wards and the community.

- 5.2. By systemwise/problemwise teaching it is meant that all the information, issues and problems that are presently taught in the conventional curriculum under different paraclinical and clinical subjects are integrated into a series which tackles medical/health problem by problem in each system pulling in the necessary detail from Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Psychiatry, Pathology, Microbiology, Pharmacology, Forensic Medicine and Preventive and Social Medicine and other medical/surgical subspecialties. This integration would help the student to understand medicine/health problems in a wholistic way.

An integrated approach would avoid duplication of teaching and would help students to correlate and integrate facts throughout the course in a better way than at present.

- 5.3. The contents of this integrated teaching should be strictly determined by the ultimate role of the student as a future primary health care provider. The process of integration would have to be preceded by a thorough indepth review of the content of all curriculum. This review would
- prioritise all contents according to their relevance/ importance to the primary health care/community health context.
 - weed out minutiae/irrelevant details which tax memory and do not support the development of diagnostic /curative / epide-miological skills in the clinical or community setting.
 - curtail irrelevant aspects like rare health problems and

those not amenable to primary health care/community level interventions.

- Clearly define practical skills linked to each problem at curative, preventive and promotive levels for the development of which adequate community/hospital level exposure has to be provided for
 - This process will modify the tradition of giving equal importance to all systems and details and will give greater importance to problems that have a significance for the community/national situation. Some disciplines like Paediatrics, Psychiatry and Obstetrics and Gynaecology neglected at present will become of greater priority.
- 5.4. The curriculum should have a clearly defined flexible core curriculum tailored to the role expected of the doctor in the future and a supplementary free elective curriculum. This will ensure a basic common level of orientation, knowledge and practical skill for all students but also allow students to explore various other areas and skills of their choice particularly relevant to their future areas of work.
- 5.5. The curriculum plan should give more time to development of practical skills than the conventional curriculum. Ward posting and community posting of longer duration and geared to enabling the student to take graded patient and community responsibility. The passive, observation process of the present curriculum must be drastically changed. Ward work and community work beyond timetable provisions must be stressed to gain confidence in emergency/crisis management.

The electives programme must be flexible enough to allow the students to further upgrade their practical skills of their choice be it rural paediatrics, simple anaesthesia or community diagnosis.

- 5.6. To enhance the community level knowledge and skill of the student the present content of Preventive and Social medicine curriculum (conventional) should be integrated with rest of the teaching. Certain areas such as societal analysis, community diagnosis, exploring the macro level, non-medical dimensions of health problems, evaluating the socio-cultural responses to health and health care must be included/strengthened. Vacation electives to give a chance to a socially sensitive/interested student to achieve a better understanding of her/his role in a field situation must be encouraged.
- 5.7. The curriculum in the conventional pattern is put together by a committee consisting of senior Professors of various faculties of a medical college. This system is inadequate to ensure that the curriculum is constantly upgraded/modified to meet the emerging social/health needs of the majority of our people.

The curriculum planning process should be a more participatory process involving elected representatives of student bodies, teachers, medical college management, university, representatives of people/ community, professionals from non-medical disciplines and members of the NGO sector involved with innovative health and community education initiatives. Senior students and junior faculty should also be consulted.

- 5.8. Once the overall plan emerges from the participatory exercise the contents and actual details of the course curriculum should be worked out by a core team of faculty representing various disciplines, all of whom should have had a substantial and relevant exposure to the community situation in which the graduate of the alternative college would ultimately work. (That the development of a core community oriented medical education faculty team is one of the most important pre-requisites for success in the venture cannot be overemphasised, since 'role models' and 'precept' are key to the development of the alternative doctor with an alternative perspective.)

6. Nature and Organisation of Training Centres

- 6.1. The training centre organisation should be appropriate to the social context and institutions that the student will be going to work in, finally.
- 6.2. There should be a central base institution with minimum structure providing learning resources for basic sciences and clinical practice.
- 6.3. Such an institution should not be a big regional hospital moving steadily towards specialisation nor an upgraded primary health centre or community hospital. It should be an average district hospital with the basic-core clinical specialities and a strong community health priority and orientation.
- 6.4. Even if there are conventional divisions into different departments for organisational efficiency, the departments and all their efforts should be geared to integrated teaching.
- 6.5. There should be a peripheral extension rural units of

both the governmental and non-governmental voluntary agency type where students should spend considerable time for learning and developing skills.

- 6.6. All aspects and areas of training should not be located in one institution. Different resource centres in the neighbourhood including medical colleges of the conventional type, voluntary hospitals, governmental hospitals and health centres, dispensaries and community health projects, general practitioners, non-medical institutions and others should be identified for various components of training. Such centres and particularly the staff involved in the actual training should be competent and adequately oriented towards the new objectives.
- 6.7. The teaching centres directly under the college should gradually reorient/evolve the relationships between categories of staff and in the staff-student, staff-patient, student-patient interactions to a more participatory nonhierarchical ethos. The whole organisation should reflect the practice of egalitarian values in its day to day working.
- 6.8. The centre should not move towards compartmentalisation and specialisation but towards greater and greater integration. Flexibility for electives in student and staff programme should be promoted.
- 6.9. The training centre could ultimately gear itself to the training of nurses, multipurpose health workers, community health workers and all of them should be trained along with the alternate doctor in many relevant topics. A health team concept should be encouraged in the training.

7. Methodology of Training

7.1. The present methodology of medical education as it has evolved over the years

- perpetuates a hierarchical structure
- actively discourages questioning
- gives the doctor a superiority complex about her/his knowledge
- discourages innovation
- discourages 'self learning'

An effective methodology would therefore be one that counters the above values and inculcates a different set of values suitable for health team work in the community.

- 7.2. The training should restrict didactic teaching to the minimum and emphasise and strengthen participatory approaches to learning.
- 7.3. Problem solving methods should be emphasised and the students should be encouraged to explore issues individually and in groups.
- 7.4. Small group methods should be promoted at all levels and phases in the curriculum.
- 7.5. Various methods to increase capabilities to learn oneself and to discriminate and critically analyse facts and contradicting, conflicting and confusing information in any area of health should be evolved and emphasised.
- 7.6. Theory and practice should be integrated at as many levels as possible and practical skill development must be strengthened.

- 7.7. Exposure to hospital and community situation should be started soon after admission to the programme and maintained throughout the course. Students should be given specific tasks and full responsibilities when in hospital, laboratory and community and not be passive observers. Learning by doing should be emphasised.
 - 7.8. Audiovisual aids particularly those which are of greater relevance for use in the community should be used in the teaching. Rather than sophisticated electronic gadgetry the emphasis should be on participatory, low cost communications that are two way in their approaches.
 - 7.9. Respect of patient, bedside manners, ethical norms, approach to the community, health team concept, non-hierarchical functioning, participatory decision making, social-cultural sensitivity especially to marginalised and poor etc., should be taught by the faculty through 'precept' and accepted 'ethos' of the institution rather than as topics of didactic teaching.
 - 7.10. Similarly the community field practice centres be they focussed or urban slums, rural or tribal areas must be built around a new value orientation that reflects the egalitarian values for which the institution is working. Merely locating the training centre in the community and then continuing with the usual urban elite orientation of the centre and student hostel within the walls of the institution would be counter-productive.
8. Teaching of Community Health/Community Medicine/ Preventive and Social Medicine
- 8.1. The evolving discipline of Preventive and Social Medicine which has its roots in the earlier departments

- of public health and hygiene has gradually seen a shift in recent years from an academic discipline consisting of a large number of inter-related and not so related topics taught in the paraclinical level to a slightly more practical discipline focusing on the emerging needs in urban and rural field practice communities outside of the hospital setting. (Hence the change in nomenclature to community medicine/health) however its separation from the clinical disciplines in the hospital setting has been complete leading to a counter productive situation where hospitals/clinical medicine and community medicine are seen by students of the conventional curriculum as two separate disciplines. The alternate curriculum must reverse this trend.
- 8.2. Whether the department of PSM/Community Medicine/Community Health is a separate department or not the whole of its teaching should be integrated with the teaching of all the other subjects. The hospital and community should not be counter posed as two situations but taken as an integrated whole and the components of diagnosis and care at primary, secondary and tertiary levels of health care delivery of each health/medical problem should be explored.
 - 8.3. Whatever name is given to the department/unit the alternate curriculum must stress that community health is not a subject or a discipline but an attitude of mind, a point of view, a way of looking at and dealing with a medical/health problems in individuals/groups in their physical, biological and social setting. The focus is on the health of all individuals in the community and not in an artificial and unrealistic setting called hospital. *The shift of focus from hospital to community/society*

shifts the focus of remedial measures as well. This must be clearly emphasised/explored and imparted in the training.

- 8.4. Selection for medical education of health problems in society should naturally depend on society's experience of most common and significant disorders which cause most mortalities, suffering and disabilities.

Taking stock of the Indian health situation as of present one would straight way give infectious diseases, parasitic diseases, nutritional problems much greater significance in the curriculum than at present.

Child Health, Women's health and Mental health would also gain priority. Even within a subject such as Child Health (Paediatrics) problems such as PEM, Diarrhoea, Respiratory infections, low birth weight, skin infections would require greater attention than congenital disorders or metabolic disorders.

- 8.5. There is a tendency in the conventional curriculum to see the common health/medical problems of the community as common diseases requiring simple treatment, hence not so important from the teaching point of view. The quest is for the uncommon and unusual which tests diagnostic capacity. This trend has to be reversed.

Common diseases are not simple especially if the focus of remedial measures shifts beyond the clinical situations. Understanding the epidemiology of malaria, acute respiratory infections, anemia, PCM, tuberculosis or leprosy in the community setting requires a thorough grounding in the basic tools and

methods of community health learning – demography, epidemiology, statistics, behavioural sciences. These must be emphasised and thoroughly developed by the alternative curriculum.

- 8.6. Practical skills in community diagnosis, preventive and promotive health care including health education, community organisation etc., should be stressed and adequate time and opportunity given to the students to develop the skill and analytical attitudes for community based work.
- 8.7. Appropriate technologies like indigenous calendars, water and sanitation technology, nutritional assessment technology, health education methods, ORT and a large number of creative adaptations that are constantly taking place due to the efforts of groups committed to evolving alternative health care approaches should be included and stressed in the curriculum.
- 8.8. Concepts and terminologies like poverty, ignorance, superstition, lack of personal hygiene, overcrowding, poor sanitation, lack of motivation, defaulters in treatment etc., must be explored in more relevant depth so that students can understand the social-cultural-economic-political processes in society which produce the inequities and disparities in the social opportunities to different social groups in our society and maintain conditions of ill-health which are often wrongly described through generalities as above.
- 8.9. The community health team of the alternative college should explore with the students a series of topics which would help them to contextualise their role in

society and analyse the values, concepts, perspectives, presuppositions and attitudes of the conventional doctor, engendered through the conventional curriculum and examine and evolve alternative perspectives and values. These would include

- a. A critical history of the medical profession and the growth of medicine.
- b. A socio-political economy of health, health care and commercial medical care.
- c. Analysis of values of hierarchy, expertise, individualism, professionalism, glorification of technology, respect of money and status and other such values which are integral part of existing curriculum ethos and medical practice.
- d. Exploration of alternative values like collective work, democracy, demystification of medical knowledge and technology, transfer of skills to other health workers, autonomy and so on.
- e. Critique of conventional medical ethics and study of alternate view points.
- f. Study of alternative approaches and experiments in health/medical care at the community level.
- g. Social goals / objectives of medical / health professions.

These topics should be discussed in a participatory way using case studies, real life experiences and observations in real life health care delivery situations.

- 8.10. Finally all the components of present day preventive and social medicine curriculum of the conventional type should be reviewed, refocussed and integrated

within the teaching of all the departments and in the problem wise/system wise teaching mentioned earlier. The alternative curriculum would have succeeded if at least all the so called preclinical/paraclinical/clinical teaching of the present curriculum is modified and given a thorough community/preventive/promotive orientation, prioritisation and review.

The community health team/department would therefore be chiefly a facilitating/enabling/reorienting department rather than just a component subject/speciality. The faculty of PSM departments of the conventional colleges would require an orientation in this direction just as much as the faculty of all the other departments.

9. Selection and Re-orientation of Teachers

- 9.1. Right attitudes and proper orientation of teachers about the values, structures, objectives, content and methodology of this experiment. Equally important is the necessary competence and knowledge. Selection of faculty must therefore be done with great care and certain degree of selectivity and imagination.
- 9.2. The faculty will have to be selected from the available pool, the products of the conventional curriculum and specialisation ethos. A process of reorientation is therefore crucial.

Exposure to existing health care delivery systems in the field/community where students may practice in the future may help the teachers define the training/learning objectives.

- 9.3. Faculty with experience in middle level or peripheral

MEDICAL EDUCATION RE-EXAMINED

hospitals or community health projects should be selected in preference to others.

Motivation, attitudes towards evolving new relevant curriculum, social sensitivity etc., should also be evaluated and given preference.

- 9.4. Reorientation will be a continuous and concurrent process built into the medical college programme. Faculty may collectively define areas of further learning for themselves and evolve suitable learning experiences as well. Exercises of indepth case studies of existing ongoing, community health projects may expose faculty to intricacies of the problem and may help them to grasp grass roots perspectives important for the teaching.
- 9.5. Faculty should rotate through training centres and extension field practice areas irrespective of the primary departments to which they belong. Since the focus of the entire training is on integrated and community orientation, faculty must be geared to play more multipurpose roles and beyond conventional classification of responsibilities and skills.
- 9.6. Continuous participatory group evaluation by staff and students together of the evolving teaching programme will help considerably in generating more relevant curriculum.
- 9.7. Though there would be a core community oriented faculty of the college various other resource persons like nurses, paramedical workers, health and development workers in the hospital and community should also have an important role in training. The

faculty and students must be ready to learn with interest and humility from anyone at any level who has knowledge and skill.

- 9.8. All faculty should be given a thorough training in participatory small group oriented, problem solving pedagogy so that they can facilitate effectively the learning experiences for the students.
- 9.9. Teachers must have a well developed critical faculty to analyse and assess social and technical problems and dimensions of health and an ability to develop the same in the student.
- 9.10. There should be a continuous and concurrent system of continuing education for all the faculty.

10. Evaluation / Examination

- 10.1. To ensure a correct and effective learning of the relevant contents of the course and the emergence of the alternative 'role model' and 'perspective' an effective methodology of evaluation has to be developed.
- 10.2. The evaluation/examination should discourage competitiveness and become more and more a criteria for self-evaluation and teaching evaluation.
- 10.3. The methods should not be a test of memory but must promote and evaluate logical and creative thinking. The focus should be on approach to a problem not minute facts and details.
- 10.4. In keeping with the overall orientation towards 'integrated medicine' and 'problem solving approach' in the curriculum the examinations also should tend to

be not subject wise but system and problem oriented so that students are encouraged to pull in information from various subjects and integrate them while solving the problem.

- 10.5. Examination and pre-examination time should not overlap with on going theory and clinical classes to ensure that non-attendance at such concurrent classes does not become serious in the learning cycle.

11. Internship

As in the conventional medical curriculum a year or more of compulsory rotating internship which includes postings at both hospital and community level should be an important and final component of the curriculum. While the overall pattern may be similar to the present one, the postings should be in wards and centres where skill development can take place and in situations which are closer to the reality of the future work of the alternative doctor in the community situation. There should be supportive supervision and concurrent and terminal evaluation of skill development at hospital/community level. The duration of postings and priority of departments may need to be modified in the context of the community situation.

12. Additional Features

- 12.1. Regional language should be encouraged as a medium of instruction and learning. Even in colleges with an all India character drawing students from different parts of the country, a commitment by the management to enable students to get an effective working knowledge of the local language in the region in which the college is situated must be ensured. Even though the course may be in a link language like

English, the students must be encouraged to gain proficiency in the local language so that skill development and patient communication are not hampered.

- 12.2. Voluntary agencies involved in Health/Development initiatives at the community level should collaborate with the medical college in imparting a different kind of training and orientation to the students. The exposure to voluntary agencies should start early in student life. A period of three months or more would be necessary. The students should be exposed to both rural and urban based voluntary agencies and those in tribal areas. The exposure to agencies operating under different ideological framework should be ensured. The student posted in the agency should be encouraged to reflect and raise questions about the ongoing activities and the perspectives of the agency. The voluntary agency should be suitably oriented towards this aspect of training.
- 12.3. For the present, training would be predominantly from the perspective of the dominant allopathic system with a strong public health orientation. Positive efforts should be made to promote an openness and some understanding of the other systems and to break the orthodoxy of the dominant system. However since Integration in the present plural context of Indian health care delivery is still a distant concept, we must accept this limitation for the time being.

Students and staff could be acquainted with the basic concepts of traditional medicine and medical systems and some of the elementary principles of diagnostic

and therapeutics by short elective courses and by short term clinical apprenticeships. This will encourage the student to develop critical insights into both the allopathic and traditional systems. A team of doctors comprising of practitioners of traditional and modern medicine who are open to various theories and practices of one another and are willing to learn together should run a small health centre or medically plural dispensary. Joint diagnosis and treatment and mutually determined clinical research would strengthen such an initiative and provide the students of an alternative college with a relevant field practice situation at some later time atleast.

- 12.4. A spirit of enquiry and critical analysis is the starting point as well as a crucial determinant of change. The 'alternative curriculum' develops from a critical reflection on the existing conventional curriculum, an assessment of alternative ideas and approaches and a constant evaluation of the components of the alternative as they emerge and evolve in a concrete situation. Research into the content and process of the alternative curriculum as well into the problems of the conventional curriculum must be an important commitment of the management and faculty of the college. This spirit of enquiry must be imbibed by all the students themselves through precept and practice.
- 12.5. An interdisciplinary educational research team must be an important component of the medical college plan. This will constantly research/evaluate important issues like
 - a. Research into teaching methods and examination/

evaluation methods

- b. Teaching in vernacular medium
- c. Link of educational effort with community needs and priorities.
- d. Role of NGOs, GPs and other institutions and resource persons in training programme.
- e. Social content of teaching at all levels/phases
- f. Gender bias in content of curriculum.
- g. Conceptual and organisational framework for integration of medical systems.
- h. Assessment of cultural/traditional responses to health care.

Many more issues will emerge from participatory reflections of staff and students concurrently during the emerging curriculum. The results of this research must be fed back into the curriculum. The research cell must not only be well versed in conventional education/research methodology but must be willing to explore and establish alternative forms of research - action research, participatory research, interactive research and so on.

- 12.6. The college evolving and organising the alternative curriculum should not work in isolation and become self-centred and inward looking. It should seek ideas, suggestions, approaches from others involved in such an initiative in other parts of the country as well as all over the world. It must submit itself - its organisation, its curriculum, its training methodology and its programme to regular concurrent, peer group review

and evaluation. By such a commitment to networking it can ensure that unlike many other efforts in various aspects of health care delivery the evolution of an alternative curriculum will not be marginalised but will be cross fertilised by all those who are keen to reform medical education whether they are working within 'conventional constraints' or are evolving 'alternative approaches'

- 12.7. The alternative approach would have succeeded if it can effectively demonstrate over a period of time, that graduates of the college are emotionally, socially, professionally, technically more competent to work in the Primary Health Care/Community Health situation than the graduates of the conventional medical colleges. This would be reflected in career options, professional performance and increasing effectivity of PHC delivery in the years ahead.

RECENT INITIATIVES TOWARDS AN ALTERNATIVE

Ravi Narayan

This last chapter was written, to locate the mfc reflections on medical education and the 'alternate curriculum' in a current, Indian context. It is an overview of important initiatives and trends in the 1980's which are bound to have an effect on the directions and focus of action, aiming towards reforms in Medical Education.

The overview is not exhaustive but tries to collate the salient features of these initiatives/trends so that readers of this anthology are kept informed about the evolving situation.

1) The National Health Policy

The National Health Policy statements in the 1980's repeatedly state that,

"the entire basis and approach towards medical and health education at all levels should be reviewed in terms of national needs and priorities and the curricular and training programmes restructured to produce personnel of various grades of skill and competence who are professionally equipped and socially motivated to effectively deal with day to day problems within the existing constraints."

While setting the mood for the 80's and reflecting the introspective spirit of earlier reports, the policy statements do not mention *who will 'review the curriculum' and how 'the review' will be translated into action.* No action is proposed towards the setting up of the National Commission on Medical and Health Education proposed by earlier expert committees nor is the Medical Council of India strengthened for such a review. Whether this is another example of 'populist rhetoric' or just a case of 'inadequate planning' only time will tell.

2) MCI Curriculum of 1982

The Medical Council of India's recommendations on Graduate Medical Education - 1982 makes an renewed attempt to incorporate a wide variety of recommendations to increase the 'health orientation' of the course as well as increase the exposure of students to 'community aspects of health care and rural health services.'

While setting the goal as *'the training of the physician of first contact. Who is capable of looking after the preventive,*

promotive, curative and rehabilitative aspects of medicine' it does not drop anything from the previously packed, disease oriented, compartmentalised, clinical/hospital focussed curriculum arguing that the 'graduate must continue to have a wide choice of career responsibilities and his training must continue to be broad based and flexible.'

The key recommendations of the MCI include :

- Reduction of compartmentalisation and introduction of integrated inter-departmental teaching.
- Emphasis on fundamentals and avoidance of unnecessary detail and areas of sophistication.
- Educational process to be more community based than hospital based.
- Emphasis on 'logical and scientific thought', clarity of expression, 'independence of judgement' and 'self education.'
- Reduction in 'didactic teaching' and increase in demonstration/clinics/practicals/field work and group learning experiences.
- Focus in all subjects on common diseases/problems encountered in the community.
- Clinical teaching should be primarily in outpatient/emergency department and peripheral health care institutions in the community.
- Faculty of all disciplines to be posted in PHC's and peripheral health centres.

Apart from these recommendations the MCI also laid down a very detailed 'Community Medicine' PSM curriculum extending throughout the curriculum. The package included:

Preclinical phase

- * Three months devoted to History of Medicine, Nutrition, Health Economics, Sociology, Demography, Normal/Social psychology, Urbanization, Ecology, Community behaviour and social factors in Health/Disease.
- * Hospital visits to understand principles of nursing and medical practice, record keeping, doctor-patient communication, medico social work and immunization.
- * Visits to community and health projects.

Clinical phase

- * Teaching in Community Health/Rural Health, Health Promotion, Health Education, National Health Programmes, Family Planning, Epidemiology, Health Care delivery Systems, MCH, Occupational Health, Non-Communicable diseases, Comprehensive Medical Care, Biostatistics, Health administration
- * All faculty to be posted to rural/urban field practice areas with students to enhance community orientation of training
- * Students to be posted in primary Health Centres/rural hospitals/urban field practice areas to participate in preventive/promotive health programmes.

Internship phase

- * Six months intership in PHCs and peripheral centres and FP clinics with training for institutional/domiciliary services
- * Rural experience to involve community based health

activities and administrative/technical supervisory responsibilities as well as health education.

In two detailed appendices the MCI outlined the upgraded curriculum in Preventive and Social Medicine and the integrated curriculum in Family Planning.

The main critique of this reoriented curriculum, is that it builds up a parallel track under the department of Preventive and Social Medicine/Community Medicine so that students see 'orthodox clinical medicine' and 'community medicine' as two alternative options in opposition rather than an 'integrated preventive and socially oriented medicine'. While all the other departments continue to teach the conventional curriculum with marginal interest in community needs and problems, the PSM faculty takes on the entire responsibility of social/community orientation of training throughout the course increasing its alienation from the mainstream. In addition the MCI has proposed little in terms of alternate pedagogy or examination/evaluation reform.

However notwithstanding the above criticism, it is important to emphasise here that the 1982 curriculum gives adequate opportunity to all college faculty, to innovate creatively within the overall constraints of conventional subject classification and examinations. Our experience at the Department of Community Medicine, St John's Medical College, Bangalore from 1974-1983 bears this out well. With all these recommendations in operation the graduates of our college had a real-life experience of rural/social realities and a relatively good skill/attitude orientation to health care challenges in the community. However, the curriculum reorientation in PSM made little impact on the rest of the conventional curriculum of other subjects and less impact on

the overall ethos of the institutions and teaching hospital. Career options were thus hardly modified with most students preferring the supervised/supported ethos of the secondary/tertiary health care system predominantly in the urban area. This would probably be the experience of other institutions in the country like CMC (Vellore) JIPMER (Pondicherry) MGIS (Sevagram), AFMC (Pune), BHU (Varanasi), AIIMS (New-Delhi) and a few others who have made some efforts to operationalise these recommendations.

It could however be said with some degree of certainty that the 1982 recommendations have generally been ignored by the majority of the other medical colleges in India. Those in the business of running medical colleges refer to the MCI regulations on minimum standards and teachers qualifications rather than the recommended approach to education. MCI inspectors too, tend to concentrate on infrastructure and staff position rather than quality/methodology of education. Hence these recommendations have yet to have the impact they could have had on student/faculty experience had they been adopted seriously.

3) 'A plea for a New Public Health'

From the Centre for Social Medicine and Community Health of the Jawaharlal Nehru University a 'plea for a new Public Health' has been made in a series of publications and papers by Professor D Banerji based on an analysis of Health and Family planning services and public health practices in India. In his postulates of a theory towards an alternative understanding of 'community health' he outlines a series of issues which should form part of any educational strategy for producing community health oriented physicians in the country. These include :

- a. Developing a historical perspective of the democratic movements and relating it to a historical account of health service development;
- b. Adoption of an epidemiological approach for the analysis of national health programmes and formulating alternative approaches;
- c. Analysis of the political economy of health, health services, population control, maternal and child health and nutrition;
- d. Addition of ecological, social and cultural dimensions to observed epidemiological and demographic phenomena (eg, in Kerala)

It is hoped that such a curriculum reorientation will enable the development of 'a critical mass' of community health physicians' who will participate and build a health service structure, seeing it is 'a socio-cultural process, a political process and a technological/managerial process with an epidemiological and social perspective.'

While these suggestions are very relevant, it is unfortunate that the JNU department has become somewhat marginalised because of its 'critical questioning' and overall 'radical' image and are unlikely to be taken seriously by the conservative medical establishment.

4) The New Education Policy-1986

The National Education Policy enunciated in 1986 by the then newly created Ministry of Human Resource Development has been the subject of much debate because of its commitment to a multifaceted package. On the one hand it stresses 'operation blackboard', equalisation of educational development of

women, scheduled castes and tribes, non formal education, continuing education, universalisation of elementary education geared to the dis-advantaged of the present system. On the other hand it is also committed to pace-setting schools, computer literacy, modern communication technologies and electronic audio-visual equipment to help the 'haves' school keep up with the rest of the world.

The government had promised to follow up this policy statement with a separate one on Higher Technical Education but none has been announced so far. In the absence of such a statement one has to study the Educational Policy and derive pointers towards new directions in Medical Education and Health policy for the 90's.

An indepth review of the statement brings out the following issues as of relevance :

- * A commitment of human values and social justice
- * Equal access to education of comparable quality to all irrespective of caste, creed, location or sex
- * A core curriculum promoting common India heritage, democracy, secularism, egalitarianism, equality of sexes, protection of environment, removal of social barriers, small family norm and scientific temper.
- * Future thrust to 'open' and distance learning and continuing education.
- * Strengthening National Councils like UGC, MCI, ICMR etc., and promoting integrated planning and functional linkages.
- * *Explore and operationalise health-related vocational courses by interlinking health planning, health service*

management and health manpower training

- * Promotion of autonomy/freedom of educational centres with accountability.
- * Improvement of pedagogical skills of teachers at all levels.
- * Examination reform.
- * Curbing commercialisation of technical and professional education and preventing emergence of substandard institutions.
- * Regular review of curriculum to phase out obsolescence and introduction of new dimensions/disciplines.
- * Overhaul in management of education with promotion of perspective planning, decentralisation, autonomy, people's involvement, greater role to women and accountability.
- * Increasing role of communities in school education and greater role for NGOs/Voluntary agencies/Social activist groups in educational efforts.

It is clear that Medical Education reform cannot occur in a vacuum in 1990's and will be affected by the above changes in orientation if 'political will' can actually see it through, beyond the paper phase. Though three years have already passed since the policy statement, this 'political will' is yet to be perceived.

5) Some Disturbing Trends

The National Health and Education Policies have clearly defined their overall options for social justice and reducing the disparities in standards and opportunities and the 'haves' and

the 'have-nots'. However there are other trends in the country stimulated by the liberalised industrial and fiscal policies of the government which are beginning to have an insidious but definitive effect on the focus and orientation of health service development in the country as well as the nature of the 'manpower education' investment of the state. While a detailed review is outside the scope of this article, it would be sufficient to list out these developments and raise a word of caution and concern for the possible effects they could have on the future course of medical education.

a. **Capitation Fees/Self financing colleges**

The growth of colleges where selection is based on the student's ability to pay for a seat and not on academic/social merit is the first of these trends.

b. **Caste/Religion affiliated institutions**

Mushrooming of institutions and educational trusts based on caste/religious affiliations is another such.

c. **Allotment of government institutions to private medical college trusts** often at the cost of facilities for undergraduates/postgraduates of government institutions.

d. **Recognition by state governments of medical colleges and undergraduate/postgraduate courses which are constantly not recognised or are de-recognised by national bodies like MCI.**

e. **Mushrooming of Private High Technology diagnostic centres with private capital and non-resident Indian (NRI) investment which promote use of high technology by offering doctors kickbacks and through high pressure**

advertising of high-tech diagnostics under health oriented insurance schemes.

- f. Corporate takeover and investment in high-tech oriented chains of hospitals.
- g. Decrease in government investment in health care centres/hospitals and increasing privatisation of health care.
- h. Increasing private practice by full-time government doctors and increasing 'monetary considerations for postings, promotions, transfers and appointments.
- i. Increasing Doctor-Drug producer axis. The ICMR-ICSSR Health for All Report has noted this trend with concern and exhorted eternal vigilance against the 'vested interest in the abundance of ill health'

The absence of clearly formulated policies on all the above trends by Government of India. State governments and professional watchdog bodies like MCI, and National Academy of Medical Sciences has meant a continuing ambiguity of commitment to 'curb these trends' as well as 'to promote them'

From the point of view of values, ethics and standards of professional conduct, medical education and health manpower training these trends are serious and cannot be ignored.

6) The ROME Experiment

The Reorientation of Medical Education Scheme (The ROME Scheme as it is often called) was launched with much fanfare by the Janata (People's) government in 1977 to introduce community orientation of medical students and teachers based on earlier 'expert committee' recommendations. The scheme

was based on the philosophy of making a medical college totally responsible in a phased manner to providing health care to the entire population of a district in which it was located. It was envisaged that the entire faculty along with undergraduate students would be involved in the shift towards the community. The entire period of internship was proposed to be spent at the Primary Health Centre/Sub divisional hospital and district hospital. To support this programme each participating medical college was supplied with three mammoth mobile clinics, imported from UK which became the symbol/mascot of the entire programme. The 'reform programme' when it was first conceived was relatively well thought out and supported with 'political will' though this changed with political changes in the country. The actual implementation took time and the early eighties saw these 'white elephants lumbering on the national highway unable to reach the unreached due to inaccessible or inadequate roads.'

A study conducted in Karnataka state by JNU Community Health Department in 1984-85 was very revealing. It covered 392 medical students, 90 interns, 28 medical officers of PHCs, 33 faculty of clinical departments, 15 faculty of PSM departments and 100 members of the rural communities served by the programme as well as top executives of the directorate of Medical Education at the State and Central level.

Eight years after the formulation of the scheme and its operationalisation it was found that :

- a. "Students were inadequately/or not at all exposed to the programme. Where exposure took place the programme was haphazardly organised and there was not much 'learning experience' or development of social/community skills.

- b. Faculty played a very passive role running OPDs within the mobile clinics with the help of interns and post-graduates. There was no interaction with village/social/community realities and no community based action.
- c. The community served, has no say in the programme except as mere recipients of rudimentary form of curative services.
- d. The officials of Centre/State government and MCI were indifferent to the situation. There were no effective checks on implementation or evaluation of effectiveness.
- e. Students and teachers perceived the ROME programme as synonymous with mobile clinics, unaware of all the other objectives of medical college involvement in district health care etc.

This study is a 'sobering' example of the end results of a lot of relevant reform programmes, which even though well conceived meet the now accepted 'bureaucratic' and 'professional disinterest' and the 'vested interest of the established system.'

Good conception of plan/reform and political will are two important components but in order to energise the system to accept and support reform, much more needs to be done.

7) The Kottayam Experiment

While exploring the disturbing trends in (5) and the present status of the ROME experiment (6) one may perceive a sense of despair and hopelessness in the situation in India - charged with populist rhetoric and faced with bureaucratic and

professional inertia. However this is not inevitable as the kottayam experiment bears out.

This experimental project carried out by prof. Jacob Chandy (a neurosurgeon and ex-Dean of Christian Medical College, Vellore) from 1972 to 1976 was a pioneering forerunner for alternative curriculum efforts. Little is generally known about this experiment since documentation was its weak point - not an uncommon problem among NGO innovators in India.

The Kottayam Project (Kerala), set out to train a new category of health worker who would act as a liaison between the doctor in the hospital/clinic and the community - taking care of comprehensive health needs directly or through the supervision of a team of paramedical workers.

The roles for the 'Community Nurse' as she was to be called, included Health Educator, Family Welfare Worker, Medical Assistant and Health Supervisor.

Nine girls from a lower socio-economic group with pre-university qualification were taken through a three year six semester community based training programme, conducted by a team of two doctors and a nurse, who instructed them in all the subjects and were supervisors of all the 'learning experiences.'

The curriculum evolved by class interaction of preceptors and students and their feedback from community experience which began from the first semester itself.

A fixed team of examiners drawn from conventional medical colleges examined the students at the end of each phase and the final examination was attended by an Evaluation Team of the Government of Kerala as well. All the candidates except one was found adequately prepared for their role in the

community and the examiners agreed that they were better than the 'average medical intern' or 'public health nurse' from the conventional colleges. After a year's internship in which 6 months were spent in community health work and 6 months as health educators in village schools, the eight 'community nurses' were absorbed by Mission hospitals of the CSI Madhya Kerala dioceses to continue 'community oriented work' in outreach areas of the hospitals. *The keyword of the experiment was integration and 'community orientation' at all levels.*

At the end of the project prof. Chandy was convinced that the experimental project had paved the way primarily for the development of Health Science Education for village schools rather than an alternative doctor/nurse. However three southern state governments adopted the course outline and elements of the experiment for three grades of health workers. Kerala for BSc Public Health (Community) Nurses training, Tamil Nadu for Health Assistants Course and Andhra Pradesh (Osmania University) for BSc in Health Sciences geared to training teachers of schools in Education for Health Programmes.

In spite of inadequate, concurrent documentation a report on this project was built up through terminal interviews with students, preceptors, examiners, representatives of village communities covered by the project and a detailed process discussion with the coordinator of the project. This report available with the Family Planning Foundation of India brings together the key ideas and experience that are of great relevance to all who hope to develop an alternative curriculum. With a little better planning in the process of documentation/evaluation, this experiment would have had a much greater impact on health manpower training. It at least

showed that with 'adequate will, commitment and imagination' experiments such as this were possible on the Indian scene.

8) Network of Community Oriented Health Sciences Institutions

A network of 'health sciences educators' who are interested in making 'education of health professionals more attuned to health needs in society' has been formed with the support of WHO and PAHO after an initial meeting in Kingston, Jamaica in 1979. The network which in 1987 has 25 full time members and fifty associate members has set five primary goals for itself:

- a. Strengthening institutions for community oriented learning and appropriate instructional methods
- b. Strengthening faculty capacity for community based education
- c. Development of technologies, approaches, methodologies and tools for community oriented curriculum
- d. Promoting population concepts in health services systems and curriculum
- e. Assisting institutions in countries that have a political intention to introduce innovations in training of health personnel in the context of 'Health for All'

Over the years, additional objectives geared to curriculum development, epidemiological health research, establishments of relationships between health care services and delivery and development of organisations/management strategies to maximise goal achievements have also evolved. The Network

organises workshops and International Scientific conferences. Task forces have been established to study and report on specific topics of concern. A series of reports, books, monographs and a newsletter are being published.

A very quick perusal of the literature and newsletter of the Network shows that there is a growing enthusiasm, the world over for

- a. Shifting of focus from hospital to community in medical education.
- b. From 'didactic', compartmentalised teaching to more 'problem centred' and 'learner centred' integrated modules
- c. From Tertiary/Secondary care orientation of conventional curriculum to more Primary Health Care oriented curriculum.

However the 'social movement' which envisions a new 'socio-economic-political-cultural order' in which 'Health for All' can be a reality for the whole community is not being adequately explored. Action is seen as the evolution of a technological/managerial/pedagogical fix rather than as a social process/movement in which alternative pedagogy, appropriate technology and participatory management are only components.

All the same the development of such a network on the world medical education scene is a concrete and welcome 'morale booster' for all of us who believe that an 'alternative curriculum' is necessary and possible.

9) The Alternative Track - 1988

In January 1988 an exploratory meeting was held in the

Medical Council of India premises in which the Chairman of the above Network (see 8), WHO officials and Deans/Senior faculty of five premier medical institutions participated. The agenda was to discuss the possibility of developing and testing an experimental parallel curriculum in Undergraduate Medical Education for India, as a joint project of MCI, Ministry of Health and WHO South East Asia office.

The proposed curriculum was to be problem based (Mc Master University Model) Community oriented (ROME scheme of Govt. of India) and *learner centred*. The alternative track was to consist of 7 units of 7 months each - 3 devoted to human biology, 3 to Primary Health Care and 2 to Tertiary Health Care. The internship would consist of 6 months of Rural health care and 6 months in clinical departments. Both the conventional curriculum and the 'alternative track' would be compared in their effectiveness in the context of Primary Health Care and Health for All.

The meeting decided on a three stage process. A visit by an Indian delegation of MCI representatives and Deans of participating colleges to programmes in Thailand, Indonesia, USA, Canada, Egypt and Holland followed by a faculty training programme by guest faculty from the above programmes (1988-1990) and the beginning of the experimental curriculum in 1990-91. A subsequent meeting held in January 1989 after 'operation tourism' was ended on a somewhat dismal note with the MCI insisting that the 'alternative track' would have to be developed within the constraints of the three professional examinations system of the conventional curriculum including the subject classification. MCI's hesitation to grant 'creative autonomy' to even a few premier institutions, arose from the situation of 'unplanned' and 'politicised' expansion of medical education

in the country, as well as the delay in the passing of a MCI related bill in Parliament giving it greater powers. Where the 'alternative track' proposal will now head or whether it has been 'derailed' is an open question.

10) Decision based approaches to evaluation/innovation:

A high powered symposium entitled 'Medical Education and Primary Health Care Needs - experiences of successes and failures' was organised at the AIIMS New Delhi, in 1987 sponsored by Ministry of Health, WHO-SEARO, UGC, National Academy of Medical Sciences, USAID and the US Public Health Services. The participants included four premier medical colleges - AIIMS (New Delhi), BHU (Varanasi) CMC (Vellore) and JIPMER (Pondicherry) and representatives of all the sponsors as well as ICMR, Planning Commission, Indian Medical Association and the College of General Practitioners.

Resource persons from innovative educational programme in Egypt, Thailand, China and US were present and one of the key resource groups was the Centre for Educational Development (CED), University of Illinois (USA).

The symposium explored a wide range of issues but the key feature was four Action Study groups on strategies for curriculum, innovation, health services research, decision based approaches to evaluation and innovation in Medical Education and preparation of leaders for innovation in Medical Education.

The symposium hoped that the four Indian institutions who already have some expertise and on going programmes would pool their resources/experiences to form a working consortium. The four centres would be linked by a common

protocol and data relevant to curriculum innovation and planning collected at each centre. Potential leaders would be selected in other institutions who could be trained and supported to motivate faculty of their institutions towards new directions, more relevant to Primary Health Care. The networking consortium would have an intersectoral dimension, interacting with representatives from other groups and with recipients (students) of the modified programmes.

The ideas that emerged in the study groups during the symposium were not very different from all that is usually said at such forums and occasions. The issue was whether an action-oriented network of committed faculty would emerge.

It is important to note that many of the so called leading institutions that are called to such meetings are primarily leaders, because of their long-term commitment to high quality, curative oriented training focussed on the best in secondary and tertiary health care. Even if they do have good community programmes these are usually ignored by the faculty of all other departments except those of PSM/Community Medicine department who are responsible for them. The faculty of even 'leader institutions' need to change their attitudes, from conventional preoccupation with tertiary/secondary care to the challenges of Primary Health Care. In fact the first step or pre-requisite of any innovation process is the availability of medical college faculty of various disciplines who have themselves managed peripheral health centres which 'graduates' of the 'alternative colleges' are expected to manage. In the absence of real-life field experience, most of the discussions would centre around 'ideas' not 'action'. All the same one would continue to hope that such meetings would, at least, increase the 'critical mass' of medical college faculty restless for changes.

11) The Miraj Manifesto

The project proposal for the development of the Christian Institute for Health Sciences by the Miraj Medical Centre which is now doing the rounds among governmental/non-governmental circles and all those interested in alternatives is an important and positive development for all of us in mfc, and should be a cause for enthusiasm. The 'Miraj Manifesto' which is the Preliminary working document summarising the perceptions of a small group of faculty available in Miraj, has enough alternative vision in objectives, methodology, student/staff selection and curriculum training, evaluation and plans for peripheral health facilities to label it a very 'promising project' worthy of our interest, critical attention and support. The sponsors have clarified that the 'Christian character' of the institution allows it to select students and staff according to the objectives of the project, (since minority institutions in the country have this freedom) an important pre-requisite for the alternative.

Though there is much homework still to be done, the Miraj group are more keen to learn from every group, initiative, experiment in the country that has relevance to medical education rather than promoting a pre-packaged alternative curriculum based on the McMaster or CED-Illinois or any other model developed in another social reality which is often the problem with various planning strategies in India. While 'premier institutions' may not have all that much to offer there is an increasing wealth of health manpower training experiments and alternative approaches in the NGO/Volag sector in India and they need to be documented and tapped for any worthwhile alternative manpower development policy. Only in October 1988 the Voluntary Health Association of India brought together NGOs involved in Community Health

training together. Among the participants there was only one medical college (St. John's, Bangalore). The Network which has just been formed is beginning to collate a directory of training programmes and innovative methodology. By casting its net wider and at more grass roots experience level the Miraj Project could hope to build on such relevant Indian experience. However not surprisingly, neither the state government nor the Central government or the MCI have shown much enthusiasm in this proposal as yet. However even in the event of a delay in such recognition, a concrete and continued project planning effort would be a contribution especially if it pulls together ideas and micro efforts from all available sources in the country.

12) The Health University Development

The 1980's have also seen the development of the 'Health University' concept bringing together medical colleges primarily and other health manpower training institutions and teaching hospitals under a single technical university jurisdiction. Tamilnadu already has one and so also Andhra Pradesh, Karnataka and other states have proposals under consideration. While the objective has been primarily administrative reform and standardisation of curriculum and facilities, the 'Health University' concept has great potential if its sponsors can explore the idea with greater creativity. A network of community health enthusiasts in Karnataka state have placed a memorandum before the expert committee studying the Health University project making a plea for social sciences orientation, community oriented field training, pedagogical training for teachers, small group/participative and interactive learning experiences, bridge/option selective courses between disciplines and systems of medicine, curriculum research, vernacular bias, removing gender bias

and radically altering the curriculum of all grades of health manpower. The health university could bring together gradually, medical colleges, nursing colleges, rural health and family welfare training centres, specialist institutions and teaching hospitals, institutions of other systems of medicine and interact with other departments of the general university as well. The scope is enormous but centralisation could also have its own problems including the further marginalisation of health/medicine from the general educational system and the domination of the hospital oriented clinical faculty on all efforts at all levels.

13) The National Teacher Training Centre

The MCI Recommendations of 1982 suggests that all Medical College faculty be in trained educational science and technology. However this aspect is still very much neglected in the Medical College planning efforts as well as in post-graduate training of future teachers. This is surprising since as early as in 1975, the Ministry of Health and Family Welfare established National Teacher Training Centre (NTTC) at JIPMER, Pondicherry to promote

- i. training of teachers in educational science and technology
- ii. development and application of systematic educational process such as educational planning, curriculum development, teaching techniques, instructional materials and evaluation.
- iii. educational research

This pioneering centre has organised regularly a National course on Educational Sciences which is geared to provide a 'critical mass' of teachers in each medical college trained in

the areas relevant for redesigning medical curriculum. The NTTC has also focussed on the Medical curriculum at JIPMER and contributed to sensitising educational planners, medical teachers and PG students. The NTTC has also been exploring new areas like Primary Health Care reorientation of Medical Education and Application of Management techniques in training of Health professionals. The Centre has been in existence for nearly 15 years and it is time to evaluate how many of the participants of these innovative courses have actually managed to introduce more relevant and innovative curriculum as well as make impact on the career choices of medical graduates in the country. Even if the impact is not as much as hoped for by the Centre it may be a good idea to document all the small but relevant changes that faculties have managed even within the constraints of the existing curriculum and the MCI regulations.

14) Strengthening epidemiological skills

One of the key areas of skill development crucial for this shifting emphasis from individual centred clinical medicine to community centred medical and health action is the development of epidemiological skills. While epidemiology is an important part of the PSM curriculum, as prescribed by the MCI in its guidelines, the teaching of epidemiological skills has still a long way to go since most medical college faculty including the faculty of PSM/Community medicine departments have little practical experience in using the skills in the investigation of hospital and/or community based problems. In the absence of this practical experience the teaching remains textbookish and does not generate interest and commitment in the medical students. While some of the earlier centres of public Health excellence, like All India Institute of Hygiene and Public Health (Calcutta), Armed

Forces Medical College (Pune) and ICMR Research Centres like National Tuberculosis Institute, National Institute of Nutrition, National Institute of Communicable Diseases and others have done good epidemiological work, skill development in this important discipline has still to become an integral part of undergraduate or post-graduate medical education in India. In recent years three related initiatives have begun to make some headway. The Ford Foundation has funded epidemiological initiatives for All India Institute of Medical Sciences (New Delhi) Indian Institute of Management (Ahemdabad), Institute of Health Management (Pachod), Tata Institute of Social Sciences (Bombay) and Christian Medical College (Vellore). These institutions have formed a network which has carried out a few joint programmes including workshops for faculty with the main aim to strengthen epidemiology in Community Medicine Departments.

The Christian Medical College (Vellore) in addition started the Epidemiology research centre which is an inter-departmental activity bringing together six of its departments to collate, disseminate, enable studies in the epidemiology of health problems. One of its major activities is organising epidemiology training programmes of two weeks duration for faculty of medical colleges, medical officers of government health centres and voluntary agencies. They also have plans to conduct workshops on topics such as case control studies, survival analysis, diagnostic tests, and health information systems.

The Rockefeller Foundation started a network known as INCLEN to influence the medical profession on the use of epidemiology by involving clinicians so that clinical practice is strengthened and improved. They also make clinicians aware

of the need for population based data for health management. They support training of selected faculty in 'developing country' institutions to get training in four centres - McMaster (Canada) North Carolina and Philadelphia (USA) and New Castle (UK). In India, five institutions have recently been selected. These include All India Institute of Medical Sciences, Trivandrum Medical College, Lucknow Medical College, Madras Medical College, and Christian Medical College, Vellore. Apart from training, INCLEN provides funds for research as well as organises regional and international meetings.

While these are welcome developments, only time will show whether the epidemiologists developed through these efforts will be able to adopt their skills to the socio cultural realities of health and health care in India. To better understand the dynamics of health care especially in countries like ours the behavioural sciences have to play a more important and crucial role in the studies of health situation than they have played in the West and hence there is a need for a creative and innovative development of a relevant socio-epidemiology.

15) The Edinburgh Declaration

In August 1988 the World Conference on Medical Education of the world Federation for Medical Education took place in Edinburgh. The Edinburgh Declaration clearly stated that the 'aim of medical education is to produce doctors who will promote the health of all people and that this aim is not being realised in many places despite the enormous progress that has been made during this century in biomedical sciences'. It exhorts medical educators 'to affirm the health needs of the human race and of the whole person' and calls for a twelve point charter of medical education reform that brings together

many of the ideas the mfc reflections have explored. It suggests 'a widespread commitment to action, vigorous leadership and political will to redefine priorities' and reallocate resources available. Will the 1990s see the sustained efforts towards these goals?

16) A Perspective plan for 2001 AD

And finally early in 1989 a perspective plan on the Role of Science and Technology for 2001 A.D. presented to the Prime Minister of our country by his Scientific Advisory Committee brings together three major thrusts to tackle 'the problem of population' and the 'curse of malnutrition,' unhygienic environment and communicable diseases, in the country.

'Right balance to be maintained between indigenous and western systems of medicine as the former are likely to make a valuable contribution to the general well being of the population'

'Educating multipurpose workers, technicians and nurses in our villages may be more important than training more doctors'

'Population problem to be tackled on a Mission mode with widespread education of women as the main thrust, better opportunities for women and guaranteed security for the old'

(Incidentally the use of the term 'Curse' in a science document is surprising and is the very antithesis of the scientific temper which the document tries to promote.)

The document is a clear indication that all of us who are so busy exploring alternatives at the grass roots have given little time for lobbying with planners and experts and our efforts are still of marginal interest to the promoters of 'Science and

Technology' in the country.

This document should be a good stimulus for all of us especially in mfc to decide whether our reflections and initiatives should continue to be discussed in our own marginalised circles or whether we need to actively enter and take on the mainstream.

In conclusion:

This overview of the events/initiatives in the 1980s highlights the 'positive' and 'negative' developments in the area of medical education reform in the country. The translation of the evolving 'mfc vision' of an alternative curriculum into concrete reality will depend whether we have the political will, commitment and leadership to join hands with the positive forces and counter/lobby against the negative forces on the current Indian scene. As the Edinburgh Declaration says: 'The stage is set, the time for action is upon us.'

BIBLIOGRAPHY

1. *An experimental parallel curriculum in undergraduate Medical Education - A Summary Draft Proposal*- M C I/Ministry of Health G O I/SEARO-WHO.
2. Annual Report 1971-72, Ministry of Health and Family Welfare, (MHFW) Government of India (GOI), 1972.
3. *A Perspective Plan for 2001 AD on role of Science and Technology*. Scientific Advisory Committee to the Prime Minister, November 1988.
4. *Aspects of Medical Education in Developing Countries*, WHO Public Health Paper No.47, World Health Organisation (WHO), Geneva.
5. Banerji, D : "Objectives of Medical Education", *In Search of Diagnosis*, medico friend circle, Pune, 1977.
6. Banerji, D : Trends in Public Health Practice in India - A plea for a New Public Health (B.C Dasgupta Oration of IPHA - 1988) Centre for Social Medicine and Community Health. J N U, New Delhi (1988)
7. Bryant, John : *Health and the Developing World*, Cornell University Press, Ithaca, London, 1971.
8. Crawford, D.G.: *"A History of Indian Medical Service"*, Thacker Spint & Co., Calcutta, 1914.
9. *Education Strategies for the Health Profession*, WHO Public Health Paper No. 61, WHO, Geneva.
10. Guilbert, J.J.: *Educational Handbook for Health Personnel*. WHO offset publication No. 35, WHO, Geneva.

MEDICAL EDUCATION RE-EXAMINED

11. *Health For All - An Alternative Strategy*: ICMR - ICSSR Report, Indian Institute of Education, Pune, 1981.
12. Madison, D. : "A Medical School for the future : The Newcastle Experiment.", *World Health Forum* (1,2) 1980,pp 133-138.
13. *Medical Education and Primary Health Care Needs : Successes and failures* Symposium pamphlet and group discussion reports, All India Institute Of Medical Sciences/MHFW, GOI, 1987
14. Memorandum of the Community Health Network in Karnataka to the Government of Karnataka Expert Committee on Health University,Community Health Cell,Bangalore,1988.
15. Minutes of the Advisory Committee for Planning Peripheral health facilities and Community Health Department of Miraj Medical Centre,Miraj,1988.
16. Naik J.P : *An Alternative System of Health Care Services in India : Some Proposals*, ICSSR, Allied Publishers, New Delhi, 1977.
17. Narayan Ravi : *Research in the Methodology of Health Delivery Training programme for Community Nurses/Health Supervisors* (The Kottayam Experiment), A CSI/FPF Project report for Family Planning Foundation of India, New Delhi.
18. *National Policy on Education* Department of Education, Ministry of Human Resource Development, Government of India, New Delhi,1986.
19. Panackel,J.and Ramalingaswami,P.:*A Sociological enquiry into the Scheme for Re-orientation of Medical Education (R.O.M.E.)*, Centre for Social Medicine and Community Health, JNU,New Delhi.(Unpublished document)

BIBLIOGRAPHY

20. Parsai Dr,B.R : *The Undergraduate Medical Education in Nepal : its concepts and problems* Institute of Medicine, Kathmandu.
21. *Personnel for Health Care - Case studies of Educational Programmes*, WHO Public Health Papers No. 70-71, WHO, Geneva, 1980.
22. *Preparation of the Physician for General Practice*, WHO Public Health Paper No. 20, WHO, Geneva.
23. Quinn, Joseph : *Medicine and Public Health in the People's Republic of China*, Geographic Health Studies, Fogarty International Centre, National Institutes of Health, Bethesda, Maryland, USA, 1973.
24. Rao K.N. *Indian Journal of Medical Education* No.5, 1966,pp 158 - 227.
25. *Recommendations on Graduate Medical Education*, Medical Council of India, 1964, 1971, 1977 and 1982.
26. *Reorientation of Medical Education for Community Health Services*,MHFW,GOI, 1968.
27. *Report of Group on Medical Education and Support Manpower* (Srivastava Report)MHFW,GOI, 1975.
28. *Report of Health Survey and Planning Committee* (Bhore Committee) GOI, 1946.
29. *Report of Health Survey and Planning Committee*. (Mudaliar Committee) GOI, 1961.
30. Sidel V N and Sidel R : *The Health of China*, Zed, 1982.
31. *Statement on National Health Policy*, MHFW, GOI, 1982.
32. Taylor, Carl et al : *Doctors for the villages*, Asia Publishing House, 1976.
33. *The Edinburgh Declaration*, by World conference on Medical Education organised by World Federation of Medical

MEDICAL EDUCATION RE-EXAMINED

Education, Edinburgh, August, 1988. Newsletter of community Oriented Educational Institutions for Health Sciences. Number 10, December 1988.

34. *The Miraj Manifesto* A proposal for the Christian Institute of Health Science, Miraj Medical Centre, Miraj, 1988.

35. *Towards Alternative Approach to Health Development in underserved areas* : A retrospective report on the R & D programme of U P Institute of Health Sciences, 1977-1980, Ministry of Public Information, Region VIII, Tacloban city, Phillipines.