Perspective in Health Human Power Development in India

-Medical, Nursing and Paramedical Education

The Independent Commission on Development and Health in India

About the authors

Professor Gouri Pada Dutta is a well-known educationist and a socio-medical activist. He obtained his post-graduate degree in Obstetrics and Gynaecology from Calcutta University and was professor of Obstetrics and Gynaecology in Chittaranjan College, Calcutta. He was also Honorary Editor of Journal of Indian Medical Association (JIMA) and a member of Syndicate of Calcutta University (SCU) and Medical Council of India (MCI) for many years. Thrice elected to the Legislative Assembly, he became the Chairman of the Subject Committee of Health & Family Welfare as well as the Committee of Estimates of West Bengal Legislative Assembly. He is also a member of the Independent Commission on Development and Health in India.

Dr. Ravi Narayan, founder of Society for Community Health Awareness, Research and Action has played a crucial role in evolving strategies on community based health care and also re-emphasizing health and poverty linkages. He is author of many scholarly publications on various aspects of health care particularly medical education. He has been the Chairman of the National Committee on Malaria Eradication set up byVHAI. Dr. Narayan has been a close associate and co-traveller of the Independent Commission on Development and Health in India. Perspective in Health Human Power Development in India -Medical, Nursing and Paramedical Education

> G. P. Dutta in collaboration with Ravi Narayan



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Alok Mukhopadhyay

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Independent Commission on Development and Health in India

Alok Mukhopadhyay

Convenor

Chief Executive, Voluntary Health Association of India

R. Srinivasan

Former Secretary, Ministry of Health and Family Welfare, Government of India

Ashish Bose

Hony. Professor, Institute of Economics

Dr. Shanti Ghosh

Paediatrician and MCH Consultant

Dr. N. S. Deodhar

Consultant in Health Sciences, Services, Management and Research

Darshan Shankar

Founder-Director, Foundation for Revitalisation of Local Health Traditions,

Bangalore

Dr. H. Sudarshan

Chairman, Task Force on Health and Family Welfare, Government of Karnataka

G. P. Dutta

Member, State Planning Board, Government of West Bengal

Rami Chhabra

Former Advisor, Ministry of Health and Family Welfare, Government of India.

Dr. Mira Shiva

Director, Women Health & Development and Rational Drug Policy, Voluntary Health Association of India

Foreword

Voluntary Health Association of India facilitated setting up of the Independent Commission on Health in India in 1995, renamed as the Independent Commission on Development and Health in India, as a people's initiative to assess the current health and development status and facilitate the process of need based and peoplecentric, sustainable development and health. Through analysis of existing data and in-depth study the Commission, consisting of distinguished persons from the health and development sectors, identifies the maladies affecting the present health care system and development programmes and provides clear recommendations for future action.

The first Report of the Commission was released in 1998 by the Prime Minister and was also presented to the President of India. The Report was widely distributed, discussed and debated in different fora, including the Parliament, the Health and Family Welfare Ministry and the Planning Commission. In many ways the report has influenced current thinking on various issues of public health including the National Health Policy and the National Population Policy.

The first Report was a summarized version of voluminous reports prepared by the Commission over two long years of painstaking but rewarding process. Some of the significant chapters were published as separate monographs.

The second Report of the Commission particularly addresses the issues of <u>Poverty</u> <u>Alleviation and Governance of Social Sector</u>. This is particularly keeping in mind the poor performance of the Nation in both these areas. Besides these core areas ICDHI will also research on following areas of current concern:

- I. Revamping and Re-energizing of Primary Health Care
- 2. Private Sector in Health Care and Medical Ethics
- 3. Human Resource Development in Health Care.
- 4. Health Sector reforms and external assistance for health
- 5. Role of Indian Systems of Medicine in strengthening health care practices.
- 6. HIV/AIDS and Reproductive and Child Health

This monograph looks into the extremely important issue of the development of an efficient and equipped health human power and sheds light on the change from a public health-oriented social welfare service to a market-driven commercialisation. It is a matter of concern that medical education is being confined within the four walls of medical colleges without adequate community orientation. There has been considerable increase in the number of medical colleges in India and also in the enrollment of students for medical course. Paradoxically, there has not been adequate human power in the field of public health. The monograph deals with the various attempts made in the past to address this critical issue but had mixed results. To bring about a remarkable difference in the quality of human power it is important to re-orient the medical curriculum, involve the civil society and initiate action at the community level.

Alok Mukhopadhyay

PRESIDENT

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1.0 Preamble

Health human power education today is at a crossroads. The Indian and international situations for health human power training and medical education have changed in recent years. The rise and fall in the <u>socialist system</u> in the last century followed by the resurgence of <u>capitalistic globalisation</u> in its newest form has imposed conceptual metamorphosis from the public health-oriented social welfare service to a market-driven commercialisation.

Technological advances in the diagnostic and therapeutic measures and improved information and communication system are playing an important role in health human power education, creating an imbalance between real need of the community and indoctrinated demands of the privileged few. A critical re-assessment and appropriate updating of the existing form is needed. This is applicable to both developed and developing countries around the world.

2.0 Medical Education

The goals of medical education in India have been clearly defined and endorsed over the last five decades since Independence. During the same time, in the latter half of the 20th century, a great deal of debate and discussion on medical education has also taken place throughout the world. The **World Health Organization (WHO)** and **UNICEF** jointly organised **World Conference on Medical Education** in Edinburgh, Scotland, in 1988. The conference produced a **Charter** known as the **Edinburgh Declaration**. The **World Medical Association (WMA)** organised the **World Conference on Medical Education** in California, USA, in 1989. General Medical Council (GMC) of Great Britain made a comprehensive review of medical education in England in 1991. One can have a glimpse of changes felt and efforts undertaken in different countries by a short review of those materials.

2.1 Changes in the concept

Some important changes in our understanding have to be understood.

The basic change in our view of human biology:

Individuals have to be viewed as part of a complex human eco-system with several levels of organisations ranging from molecular to cultural. Personal and collective behaviour should be noted as key factors in the genesis of disease and the family or the community should be regarded as the patient.

To recognise the limits to curative biomedicine:

The expensive futility of after-effect remedial interventions is known to all of us. It should be understood that preventive approaches are required to be dealt with by behaviour rather than patho-physiology. Behaviour management requires a familiarity with social issues, which for so long, has not been part of the prevailing Western medical expertise. It is also a fact that when biomedicine performs well, it adds to our burden of illness. Advanced technology is creating a surviving population with residual morbidity and added susceptibility. This is producing causalities of "over-treatment and overinvestigation".

Appreciation of the 'systems' aspect of health care:

We can no longer regard the organisation of health care as merely a way of bringing physician and patient together or of 'delivery' of cure and care. The systems are large enough to influence their own socio-economic and cultural environments. For this new perspective, one should move from individual to population, patho-physiology to behaviour, microbes to environments and treatments to care systems. This move is now supported by hard evidence and not merely by intuition. The healthcare approach has now shifted from a concept of 'less science and more humanity' to 'not less science but better science'. There is an urgent need to regain and reinforce the 'human face' of healthcare that has been eroded in the bargain of 'better science'. The whole range of new health services should be based on epidemiology, bio-statistics, and behavioural and social sciences. Community-based primary health care should be the key to modern day health care services.

2.2 The Evolving Challenge

To implement these changes, a thorough re-orientation of medical education is crucial. The doctor remains central to healthcare delivery in any system. The behaviour of the doctor determines where, how and to whom care is offered. The doctor is our most expensive healthcare resource and has the single greatest influence in determining how other resources could be used. The first educational target would therefore be the faculty and the university. The government should be called upon to create policy for implementation of the re-orientation program.

The goal of medical education in India has been defined by various elite committees since Independence. The concepts of 'social physician', as referred to by the Bhore Committee, 1946; and the Mudaliar report 1961; the basic doctor as suggested in the Patel report 1970; the family and community oriented general practitioners with social responsibility in the Shrivastava Committee report on health, 1975, of the community-oriented health personnel for comprehensive health-care as defined in the ICSSR-ICMR report 1981 and of the community physician (NEPHS 1990) have all underlined the type of doctors required in this country.

These pious wishes in the stated goals of policy failed to satisfy the needs of the community particularly, the needs of the unprivileged and under-privileged people of our country.

In spite of the phenomenal quantitative growth of the institutional framework, efforts to qualitatively re-orient the curriculum to match policy goals and the populist rhetoric of doctors for the villages, medical education has limped towards greater and greater crises. This is illustrated by the fact that the young graduates are opting for urban hospitals and clinical practice while the vacancies in rural health centres are alarming. Professional interests both at the level of practitioner and educators continue to revolve around illness care at the secondary and tertiary level.

It is time the policymakers understood that doctors educated and trained in the present system of education are positive hindrances to public health because this system of medical education is limited within the four walls of medical colleges, devoid of community orientation. It is only information imparting, not problem solving, and dependent on sophisticated diagnostic and therapeutic measures from

the beginning; as such, it is destined to be specialist oriented.

"Notwithstanding the attainment of high standards of medical education, a large majority of the doctors are not trained and equipped to meet the needs of the community in the matter of preventive, promotive and curative health care services, particularly for the rural areas...that the training continues to be hospital-based, thus making the trainee doctor dependent on sophisticated aids and diagnostic services and giving him very little exposure to rural conditions." (WHO SEA Regional Committee resolution No. SEA/RC 29, R.9.1976).

Healthcare for the people, in a class stratified society has been implemented to serve the interest of the upper classes. Except for some philanthropic and altruistic institutions, medical institutions have been exploited for commercial benefit. Challenges of primary healthcare and optimisation of public health, which emphasise primary prevention, can hardly be undertaken in the hospital-based medical college in their present form. The increasing commercialisation, privatisation and erosion of norms in medical ethics are inherent in the present system. This system and increasing trend of social delinquency allure medical teachers to clandestine private practice and encourage the unholy nexus between doctors and the pharmaceutical and technology-producing industry.

2.3 Diagnosis of the Problem

An overview of the growth and development of medical education in the country is necessary to understand the dynamics of change and the emerging problems in this sector.

Pre-British Phase

India had its own system of medicine and health education. Two main literary traditions, Ayurveda and Unani Tibb were practised in the region with considerable amount of benefit to the people. The basic principle of these two systems was identical and holistic. The pharmacopoeia and therapeutics of both the systems changed through interaction between them (Metcalf 1985:5 quoted by R. Jeffrey). The monastic or university education of Ayurveda involved attachment to a teacher as an apprentice resident. Training of Unani medicine was also carried out in "personalistic informal setting of family, homes and apprenticeship" (ibid). Both the systems had a living link with local home medicine and folk medicine. They used appropriate technology and prepared treatment materials from its natural surroundings.

Initially, the European officials consulted indigenous healers. "In the late seventeenth century, general view amongst British officials was that local diseases were best taken to

local doctors" (Crawford 1914). The change started when some members of Indian elite, either displaced or competed with indigenous healers employed European doctors as consultants. Some Indians were given training in European medicine as a part of expansion in medical services for the army (Leslie, 1976, ibid).

In 1814, Court of Directors in London encouraged its employees to investigate the value of local medicine and medical texts. A Native Medical Institution (NMI) teaching indigenous and European medicine was established in 1822. This process of mutual involvement was disrupted by a change in policy in 1835. Macaulay's minute on education policy prevented the schemes that attempted to mix European and Indian culture or aimed to restore Indian culture to bring back its glory. The NMI ceased to provide teaching of Ayurveda and Unani Tibb.

In 1872, there were only 3769 physicians, surgeons and doctors of western medicine in Bengal. The number of *Kabirajes* and *Hakeems* was 24,000. In 1880 medical bureaucrats who were aware of the strength of the indigenous doctors, became hostile to indigenous medicine. The growth of a new Indian middle class provided more financial opportunities to the doctors trained in western medicine (Jeffrey 1979).

At the end of World War I, medical advisors to the provincial governments asserted that the Indian System of Medicine were archaic, incapable of advance and based on unsound principle. Even then, "many British doctors in the late nineteenth and early twentieth century were virulently hostile to healers who had such a position in the major cities. This hostility suggests the strength of such healers rather than their weaknesses" (Jeffery, ibid).

Many elites do argue that India's high morbidity and mortality rates means that indigenous treatments were inefficient. It should be understood that "no medical treatment would have made much difference since mortality rates were so closely linked to poverty, famine and environment" (Jeffery). The British introduced western medicine only for treatment of their sick countrymen and associates.

British Period

The year 1860 should be regarded as a watershed of health service and medical education in India. Prior to 1860, medical education in India, as in Britain, differed little from apprenticeship system.

In 1857, Universities in Calcutta, Madras and Bombay were established. The medical colleges became their medical faculties and started giving medical qualifications. The General Medical Council of London (GMC) gave recognition to the universities.

Subsequently, this was vested with Medical Council of India (MCI). So, the medical education was filtered through colleges (Govt or private); universities gave degrees and diplomas but course curriculum was determined by MCI, having no direct supervision on the performance of colleges (mode of teaching and training). This must be stated to understand why healthcare introduced by the British and adopted by their successors in independent India followed a pattern of non-optimisation.

The objective of medical education is to provide proper health care to the community. The present medical education is failing to serve the purpose because of its inherent problems. The philosophy of Western medicine is unifactorial, which results in the commercial exploitation of curative medicine. The present medical education is framed in this direction.

Medical education depends on (a) general education, (b) nature or type of health services in the country and (c) political will of the ruling class. Consequently, the medical education has to be tailored accordingly to serve the interest of the rulers. The British implemented this system for their own benefit. The Indian successors who are the products of the Macaulay doctrine are controlling this in the postindependence period. This provides the key for understanding the problems and deficiency of medical education in India.

The reluctance for rural as well as preventive services is inherent in the system. Indian medical colleges carried on the legacy of the London pattern where eminent clinicians dominated. The rising role of laboratory medicine was also reflected in India as elsewhere. The institutes for public health had little organic relationship with medical colleges and were in themselves a "piece meal and ad-hoc response to sudden epidemic emergencies" (Ramasubban 1982:32).

Expansion of Medical Colleges

There has been a massive expansion of medical colleges in recent years. The number of colleges has increased from 22 in 1947 admitting 1,983 students per year to 221 colleges in 2003-04 admitting 22,711 students every year. Out of these 221 colleges, the government runs only 109; four are run by universities and private bodies run the remaining colleges. Government colleges admit only 12,273 students. The MCI has given recognition to 164 colleges and permission under section 10(A) has been granted to 40 colleges. Remaining colleges are unrecognised.*

This portrays a dismal picture of commercialisation of medical education. According to information from Health Information of India, (2000-01), post-graduate degrees

^{*} www.mciindia.org

were awarded to 1.225 doctors out of which 770 were male and 455 were female doctors. Only 20 doctors were from community medicine. A similar picture is noted in post-graduate discipline. Out of 486 post-graduate diploma-holders, 187 were female and only 10 belonged to community medicine. Disparity is also noted between the clinical and subjects for basic sciences like anatomy 12 (male 5, female 7), physiology 16 (male 5, female 11) and biochemistry 7 (male 6, female 1). The figures speak for the commercial inclination of medical education. Postgraduates in clinical subjects can earn more through private practice.* Number of teaching institutions for doctors of other systems is presented to understand the problem of medical education, although a separate chapter for ISM&H has been provided in the report. The number of medical colleges teaching other systems of medicine and their admission capacity are: Ayurveda 196 colleges admitting 7,316 students, Unani 37 colleges admitting 1438, Siddha 2 colleges admitting 150 and Homeopathy 166 colleges admitting 7725 students per year (year 2000). The number of doctors in the country (in 2001) is as follows: western medicine 5,92,215 with a doctor-population ratio of 1:1754; Dental Colleges 137, Dental Surgeon 39,105; Ayurveda 4,27504, Unani 42,445, Siddha 16,599, Homeopathy 1,94,147=6,81,124.

Currently, too many doctors are being produced at the cost of training other members of the health team. If the production of practitioners of other systems of medicine is included in medical man power statistics, this situation of 'excess' becomes worse. The total no. of doctors including all systems is (592215+681124) 12,73.339 with a doctor-population ratio of 1:801, while the Mudaliar Committee recommended only 1:3,600. However, regional variation exists. Based on Mudaliar Committee norm of one college per 50 lakh population, review of the current situation shows that the number of medical colleges in some states (such as Karnataka (30), Maharashtra (38), Tamil Nadu (19) and Delhi (5) is higher than their entitlement requirement, whereas states like Bihar, Madhya Pradesh and Uttar Pradesh have far fewer colleges than their requirement. These figures reflect the overall regional imbalances. It should also be remembered that the number of medical colleges alone does not solve the disparity that exists in all aspects of health care system in the country.

2.4 Management of Medical Colleges

The number of government medical colleges has increased disproportionately since 1947. The increasing commercialisation and privatisation of medical education after 1988 reinforced the number of private medical colleges. This affected the management of the institutions. The situation is as follows:

Admission requirements and selection procedures have changed over time. There is no uniformity on selection of students. Merit and aptitude tests from general

^{*} Health Information of India, 2000-01. Annual Report 2001-02, MCI.

education should be the criteria. Different types of reservations and different forms of entrance examination have created many complications. Reservation has provided greater opportunities for the socially disadvantaged sections of the community. However, in practice, only already privileged groups of the scheduled castes, schedules tribes and other backward class are taking full advantage of this opportunity. The trend in admission for women has shown a substantial increase. In recent years, the ability to pay high tuition fees has become a major determining factor both for free and payment-seeking admission to medical colleges. Capitation fees have been legally struck down as "unconstitutional, unreasonable, unfair and violative of the rights to education". Even so, this evil practice is not only continuing unabated at many places but also increasing at an alarming rate. The Supreme Court decision of keeping 15 per cent of seats as management quota even in government. run medical colleges is effectively depriving many deserving students, who do not have the adequate financial means. The practice of raising tuition fees and other charges in the name of self-financing is limiting the right of the poor meritorious students. This is against the basic code of a welfare society.

In 1996, the Working group on Medical Education of Planning Commission emphasised:

- a) Formulation of a National policy on Health Education and Training;
- b) Priority to continue education for all categories of staff;
- No need for any more medical colleges and no need to increase the number of admissions in any medical college;
- d) Re-orientation of medical education so that the students will be acquainted with the need of health care for the community and can deliver it;
- e) Establishment of an autonomous medical and health education commission.

Dr. Bajaj submitted a draft on National Education Policy in health sciences in 1989. In the same year, the Subject Committee of West Bengal Legislative Assembly (Health) submitted a comprehensive report on Medical Education. These seem to have little effect on the policy-makers and administrators.

Scant respect was paid to these suggestions. Currently, too many doctors are produced at the cost of training other members of the health team. If practitioners of all systems are considered, then there are 12,56,724 (Allopathy 5,92,215 + Ayurveda 4,27,504 + Unani 42,445 + Siddha 16,599 + Homeopathy 1,04,147 + Naturopathy 429) doctors in India in recent years.

In addition, there are 39,105 dentists. The nurses of all categories number only 7,76,355°. So, instead of having the proportion of three nurses to one doctor, we have the reverse.

*Health Information of India, 2000-01

There are further distortions. The majority of the doctors opt for post-graduation, which has focussed mainly on secondary and tertiary care and super-specialisation, less on basic sciences, and the least on public health and its related disciplines. Clinical specialists far exceed the non-clinical specialists and that of the basic sciences. The worst situation is seen in the area of public health, which has already been mentioned. This trend has to be reversed. Areas like public health epidemiology.primary health care, community health, general practice and family medicine should become the major focus of post-graduate education.

Motivation levels of the faculty members in medical colleges is very poor, especially towards broader health and development goals. Most of them are averse to public health. This problem is further compounded by the continuing hanker for private practice among full-time teachers. Mechanical procedures for selection of teachers without assessing their aptitude or motivation and competence to teach along with an absence of teachers training are creating problems. The lure of the private medical sector providing various types of facilities is an added element.

The Medical Council of India's (MCI) recommendation for rationalising community medicine by having a joint programme with all the departments has not been implemented. Far from becoming an integral part, community medicine has been marginalised. The involvement of other departments in the process of social and community-orientation is inadequate, if not totally lacking. The other departments continue to focus and draw inspiration from high-tech, hospital-oriented tertiary and secondary care medicine as practised in the West. The situation is such that there is increasing evidence that the investment of the taxpayers' money in medical education benefits the private health care sector and the health services of the established market economies of the world.

Brain drain reached an alarming level in 1986-87. This has now been overshadowed by increasing investment in private high technology diagnostic centres by non-resident Indian (NRI) doctors. This is turning out to be a market economy process supported by the medical industrial complex of the West in search of new markets.

Corruption has become the bane of public and private life in India. It has crept in all sectors of development and human endeavours reflecting an over-all decline in ethics and values. The arena of medical education is no exception.

Apart from medical malpractice at the time of admission and examination, corruption has led to a growing link between the medical profession and the medical industrial complex, this creating a vested interest. The mushrooming of privately-financed medical colleges and the increasing problem of private practice among full-time teachers has further compounded the problem. Barring a few isolated groups of idealistic medical students and doctors, professional leadership and the teaching faculty have not shown interest, dynamism or the ability to counter adverse political and other influences in various aspects of medical education.

Interaction between medical educationists and the institutions, co-ordinating centres, training and research in voluntary sector experimenting with alternative strategies is long over due. Efforts at continuing education have been inadequate for doctors, health workers and health professionals. In the present system of education, the period of learning basic sciences have little integration with the clinical classes. The teaching in the clinical departments is mostly theoretical. The students do not take part in the diagnostic and treatment procedure (hands-on training). The examinations are summative. There is little scope of continuous evaluation. Hands-on training starts from the period of internship. The craze for post-graduation has reduced the rotational internship, a preparatory step for general practice and the corner stone for specialist training, to a farcical exercise.

2.5 Medical Council of India

In India, medical education is implemented by the medical colleges run by either State governments, municipal corporations (in few states) or by private bodies like trusts and societies. Universities give degrees and diplomas at under-graduate and post-graduate levels. Universities run four medical colleges. The Medical Council of India was a statutory body initially required for maintaining a register of the qualified medical practitioners.

Previously, the MCI had only a recommending function for the course and curriculum and methods of imparting education, but no regulatory power. After the Medical Council Act was adopted in Parliament in 1993, this changed and a considerable amount of power is now vested with the MCI. MCI permission is mandatory for institution of new college, opening of new courses and increase in the seats of medical students (UG and PG). The MCI has given direction for revised course curriculum and modality of teaching to the medical colleges. It has the power of de-recognition of colleges, courses and even reduce the seats in medical colleges.

The MCI's ability to maintain standards has been severely compromised by state governments/state universities falling prey to pressure groups and extraneous influences. At the same time, MCI inspectors in the recent past have not been able to maintain the high ethical standards expected of them to ensure the enforcement and maintenance of standards. As in all aspects of national life, corruption and extraneous influences of money power and political interference have managed to circumvent the inspection mechanism.

The MCI is now raising money from the colleges for each of its interventions, which can become a burden on the colleges which are then forced to charge more from the students. This makes medical education costly so only students who can pay more will get the opportunity depriving students from poorer backgrounds. For this reason, private medical colleges are becoming increasingly dependant on various forms of clandestine financial transactions and political interference. The representatives of the State government and universities constitute the general body of the MCI; some are also elected members from the medical profession. Most of them are medical teachers.

The MCl in its own way is striving to improve medical education in the country. Despite this, it is a fact that only marginal improvement has been noticed in the medical education in so far as community need is concerned. The amended regulation on Graduate Medical Education in May 1997 was further marginally amended in 1999 with regards to the eligibility and modality of selection of teachers for various posts. The preamble in the Chapter of the regulation has been catalogued in an exhaustive fashion delineating the areas of concern and futuristic considerations. An emphasis on community orientation of under-graduate medical education the MCl had proposed an alternative/innovative under-graduate medical education to the Government of India out of two primary considerations:

- Structuring the model so as to impart various components in the present model viz., the Primary Health Centre, the District Hospital and the institutions on a equal footing of importance;
- 2. Making all these places the sites of actual learning in taking medical education beyond the four walls of the college.

This proposal is lying with the Department of Health, Govt. of India. In his address in the meeting of MCI (2001), the Council President stated:

"Arising out of the recommendations made out by the Committee constituted for the purposes of laying down a comprehensive policy in terms of a prospective master plan for opening of new medical colleges keeping in view the requirements of the health personnel and socio-economic backwardness of a particular region, the need for evolving an alternative system of under-graduate medical education was perceived and accordingly the committee constituted for that purpose, proposed a comprehensive alternative model of under-graduate medical education with total community centredness, whereunder most of the training shall take place in community settings and also preference in admissions are to be given to students with rural background as a motivation, which ultimately is expected to result in educational products settling back in rural areas where they are drawn from, as a befitting answer to the geo-concentration of medical colleges as well as medical professionals in urban areas. The matter is pending acceptance by the Ministry of Health & Family Welfare."

Expert committees and policy statements have viewed the complexities of the medical education process in the broader socio-economic-cultural-political context. The National Education Policy in Health Sciences (1989) and the Eighth Plan document have also endorsed such a broad analysis. The suggested policy shifts are:

- A proper balance between technological and humanistic medicine.
- A more holistic approach, covering the promotive, preventive, curative and rehabilitative aspects of medicine.
- A proper balance between tertiary hospital-based education and primary community-based education.
- A shift from the use of teacher-oriented to learner-oriented methods, which would include self-directed learning and self-evaluation.
- A progressive change from narrow discipline-oriented teaching to a problemoriented approach.
- A shift from theoretical teaching to experimental learning.
- A major change in the role of the medical teacher, from one who imparts
 a defined quantum of knowledge to one who facilitates and motivates
 community-based student learning.

However, there has been an overall lack of political, administrative and professional will to actually change realities at ground level. While populist rhetoric is getting more pronounced, the actual development process is becoming subservient to market forces, much aggravated since the inception of the New Economic Policy.

There is, therefore, a growing dialectical tension between the increasing need to re-orient medical education towards the needs and priorities of the community, and the increasing trend towards privatisation, commercialisation and high-tech tertiary care. The current scenario is, therefore, full of contradictions, challenges and is ill-disposed.

The broader contextual issues in which medical education reform and re-orientation have to be situated have been emphasised. The growing spirit of introspection and dissatisfaction has led to some experimentation and innovation of medical education in a few institutions all over the country and also in the international arena. A review of the key experiments and emerging initiatives are discussed.

Sokhey Committee (1937) and the Bhore Committee (1946) dealt with the problems of medical education and its community orientation. In: 1974, the Srivastava Committee diagnosed its major problems as strong inclination of teachers towards inherited teaching methods, an exclusive orientation of the curriculum to tertiary care, oblivious to the community's health needs and an obsessive reliance of graduate doctors on specialisation, super-specialisation and the acquisition of post-graduate degrees more for commercial benefit than to acquire professional wisdom. Several reports and recommendations have been put forward. Some of them are mentioned below:

2.6 The Kottayam Experiment (1972-76)

The Kottayam experiment was the forerunner of the integrated teaching approach whereby a student has a holistic view of medicine, with clear goals of community medicine as well. In this experiment, the curriculum content and process evolved from classroom interaction between the teachers and students based on feedback from community experience, beginning from the first semester itself. A small multidisciplinary core team functioned as both instructors in all the subjects, and supervisors of all the learning experiences. This experiment was directed towards integration and community orientation at all levels.

Not surprisingly, the established medical education system did not take this experiment seriously. However, the government of three southern states adopted the course outline and elements of the experimental course for B.Sc. Public Health Nursing (Kerala), Health Assistants (Tamil Nadu), and B.Sc. Health Sciences (Andhra Pradesh) (Narayan, R, 1977).

2.7 The CHAD Program, CMC - Vellore

The Christian Medical College [CMC] in Vellore has been a pioneer in the innovative medical education program in India. Since its foundation, it had been concerned with the health of the rural population and had approaches to medical education of relevance to rural people. More recently, the college adopted a key strategy to integrate relevant health and socio-economic activities in the undergraduate medical education system as part of its Community Health and Development [CHAD] programme. Community based postings for medical students are made in the pre-clinical year (COP) and twice in the clinical year.

The innovations of this program included an emphasis on team work and skills in a community based, problem oriented, self-directed learning situation in block posting of medical students. This was accommodated within the framework of the existing MCI curricular guidelines. There have been some efforts by other centres in India to evolve communityoriented training strategies based on and going beyond the MCI guidelines. These centres have included St. John's Medical College, Bangalore; Christian Medical College, Ludhiana; AIIMS, New Delhi; JIPMER, Pondicherry; - all of which have evolved different types of community programmes. However, these have had a limited impact either due to inadequate faculty interest or to fast-changing social value systems in the medical students and teachers' attitudes.

Nonetheless, the CHAD program has started to have a perceptible impact on medical education in India at a national level.

The program highlights two important aspects of ROME: "team work and intersectoral action". While the team work approach effectively shows the students the skills necessary to work as a member if not the leader of the health team, the inter-sectoral approach exposed students to other social development activities such as agriculture, animal husbandry, adult education and income generating programs. This ensures that such physicians can interact with other sectors better to improve the health of the community. The CHAD program therefore has its strength in its community orientation and concern for human values as well as its problem orientation and emphasis on behavioural sciences.

2.8 The MGIMS [Wardha] Experience

The Mahatma Gandhi Institute of Medical Sciences, Wardha, was instituted in commemoration of the Gandhi Centenary in 1969 by the Kasturba Health Society under the able leadership of Dr. (Mrs) Sushila Nayar, an ardent disciple of Mahatma Gandhi and a former Union Minister of Health and Family Welfare, Government of India.

This institute provided an excellent example of how, while remaining well within the framework of the existing curricular guidelines, the teaching and training program could accommodate an optimum degree of community orientation. The innovations included adoption of local villages by the institution and assigning small group of students, a few teacher-facilitators and an appropriate number of ancillary health staff to those villages and making them responsible for comprehensive health care of the inmates of those villages. The performance of the students on such assignments is evaluated periodically and used as eligibility conditions to sit University examinations.

This initiative by the institution has definitely paid dividends through qualitative improvement in the health care situation of neighbouring villages in Wardha district and has also had earned her a favourable and congenial reputation. However,

there has been no attempt to evaluate the impact, short term or long term of this initiative on the attitude and skills of the doctors graduating from the college in their future pursuits of health care delivery.

2.9 The ROME Programmes

Since the mid-70's, the government of India initiated the re-orientation of medical education programme (ROME) by donating three mobile clinics to many medical colleges and allotting primary health centres to them. This programme, which started with a great deal of political will during the Janata Government in the 1970s, lost its significance gradually due to non-implementation of recommendations from mid-term reviews and increasing neglect by medical college leadership.

The World Health Organization wanted to promote its own version of the Reorientation of Medical Education [ROME programme] in the South East Asian Countries. The goal for this ROME program envisaged that 'by the year 2000 all medical schools should be producing graduate or specialist doctors who would be responsive to social and societal needs and who would possess the appropriate ethical, social, technical and management abilities to enable them to work effectively in comprehensive health systems based on primary health care'.

The general targets of the ROME program included the following:

- Developing a medical education system i.e. responsive and relevant to the needs of the country in terms of the equality of medical graduates produced.
- Selecting and making necessary changes in the curriculum in line the above target and engaging in active co-operation of teachers, professional societies, licensing authorities, health administrators and communities in the reorientation of the curriculum.
- Implementing the educational program reforms by adapting the criteria and procedures used for selection of medical students so that they are directly related to the expected performance of the medical graduates.

It was, however, left with the individual country to decide its own specific targets in conformity with the broad goals of the ROME program. So far as India is concerned the experiences of such endeavours have not been very rewarding or pleasant. This is not because the goals were not achievable but probably because it was too much to expect that such goals - particularly those relating to emphasis on community orientation - could be achieved without bringing about necessary reform in the traditional curriculum and designing the specific targets appropriately. However, the experiences in other South East Asian countries were also equally "bad or not so good". Nevertheless, the attempts and lessons thereof definitely provide important insights and lead to strategizing future innovation efforts.

2.10 Analysis of several medical college initiatives:

The effort is to evolve a more sustained and regular community-oriented training strategy within the framework of orthodox curriculum.

A recent study Report of Independent Commission on Health in India (1999), has identified 50 initiatives by medical colleges in India including the innovative colleges mentioned above, that could be used to evolve a new strategy in the country. These can be classified into six broad areas which form the backbone of the re-orientation process.

Improving the Pedagogy of Medical Education:

Important areas of innovation and reorientation are the clarification of objectives at the institutional and departmental levels and improvement in the skills of the staff in modern educational techniques. This has helped to make the process of education more rational and meaningful, both for the students (who are clients of the system) and the faculty (who are facilitators of the system). However, while improvement in pedagogy is an important step, it is not sufficient, since it has to be balanced with a simultaneous change in content towards greater social and community relevance.

Moving Beyond the Teaching Hospital:

A wide range of initiatives has developed to provide experience at the primary health care/community level, so that students and the faculty gain a learning experience beyond the walls of the teaching hospital. These initiatives are additionally significant because the process, experience and demands challenge the established value systems of medicine, the culture of medical education, the urban middle class aspirations of the students and faculty, and the ingrained enthusiasm for high technology oriented secondary/tertiary level medicine. Community-orientation programmes (COP) in the pre-clinical years, and community-based postings in the internship years, have shown great potential. However, these are too limited to make a lasting impact to loosen the grip of 'orthodox clinical medicine' and surgery.

Widening Horizons:

Introducing new concepts and topics as additional subjects to widen the horizon of future doctors and prepare them for involvement in primary health care and community-based situations, is another important group of initiatives. These include behavioural sciences, ethics, first aid, nursing, rational therapeutics, social paediatrics, social obstetrics, epidemiology, management and health education. The efforts are, however, isolated and not sustained.

Improving Skill Development:

Greater opportunities to develop skills have been explored at the student and internship level by increasing in-service training through camps, clerkships and special postings. Here, skills can be acquired through graded responsibilities in actual procedures. However, these attempts have remained ad hoc and not found place in the routine methodology throughout all disciplines.

Transcending Compartmentalisation:

Attempts have been made to integrate subjects and phases of teaching at different levels and go beyond the traditional compartmentalisation process. The orthodox, subject-wise classification of disciplines and the structured framework of subject-specific examinations stipulated by the MCI have however, hampered these.

Promoting Self-Learning:

Initiatives to promote self-learning by students have been taken by some institutions. This is probably the weakest area of innovation because of the traditional hierarchical educational system, which sees students as passive recipients rather than active participants.

2.11 Alternative Tracks and Curricula

Innovative programmes all over the world have suggested a shift from the orthodox medical education framework to alternative tracks that are learner-centred, problem-resolving which teach integrated human biology and community-oriented medical clinical medicine. Some such initiatives in India include:

- The Centre for Social Medicine and Community Health, Jawaharlal Nehru University, made a plea for the concept of a new managerial physician with epidemiological, managerial and social capabilities, as part of a new public health policy.
- The Medico Friends Circle (MFC) anthology of ideas entitled 'Medical Education Re-examined' formulated a community-oriented curriculum to produce primary health care service providers, very different from the MCI Guidelines of 1986. This was presented to Punjab University by Christian Medical College, Ludhiana, and accepted – but could not be operationalised due to an unavoidable crisis.
- The MCI revised curriculum of 1997 which attempts to achieve the educational
 objectives through a problem-based, community-oriented and learner-centred
 approach. The MCI also proposed a parallel track that focussed on general
 practice, family medicine, maternal and child health and community health but

was unfortunately rejected by the Deans of medical colleges at a National Consultation.

- The Miraj manifesto a framework for an alternative medical college drawing upon the MFC curriculum and other inputs was put up to Maharashtra government by the Wanless Hospital, Miraj. This experiment also failed to get operationalised.
- A consortium for inquiry driven strategies for medical education reform was started in India in 1987-88, with AIIMS – New Delhi; BHU – Varanasi; CMC – Vellore; and JIPMER – Pondicherry as a core resource group. This network expanded by a process of twinning to 16 other colleges and many interesting inquiry driven and evaluated initiatives emerged as a result of this. However, like many experiments in the country, the efforts could not be sustained.

Unfortunately, none of these innovative institutional approaches have been adopted by other institutions in the country, because in these efforts, MCI was not taken into confidence.

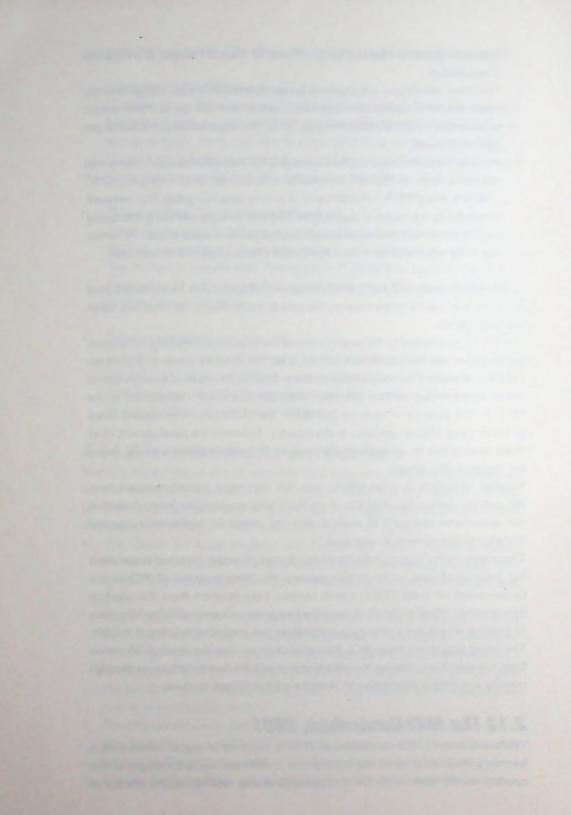
The MCl is constituted by the academicians of the country representing universities, governments and administrative echelons. It has the statutory power to implement the form of medical education in the country. Even so, the views of various centres intent on amending medical education were not adequately represented in the MCl. In the absence of such co-ordination, the MCl's recommendations failed to make these efforts operative in the country. However, the development of all these approaches by so many groups in India definitely indicate a strong desire for change in the system.

Another drawback in these efforts was that they were institution-based from the outset. Emissaries from the institutions who are basically indoctrinated in the unifactorial approach of medical care are unable to implement integrated community-based medical education.

These approaches illustrate the desire for change. However, no actual experiment has been conducted so far. In this context, the latest proposal of MCI to the Government of India (2001) needs serious consideration from the medical educationists. Most of the aforementioned suggestions have overlooked the place of training, where the community-orientation and integrated learning is feasible. The latest suggestion from MCI, thus, advocates starting the medical education from the periphery, utilising the infrastructure and the human resources through training and proper motivation of both the educators and students.

2.12 The MCI Curriculum, 2001

While the revised MCI curriculum of 1997 is currently in vogue nation-wide, a further critical audit of its implementation in different medical colleges in the country would leave room for scepticism. One may well doubt the efficacy of



phase III institutes) and non-core group teachers (in the phases I and II units). All these teachers will receive prior training, motivated with provision of adequate facilities for this purpose.

Student-centred, active learning

Sufficient opportunities must be provided for self-learning. The methods and techniques that would ensure this must become a part of teaching-learning process.

Emphasis on common problems

Emphasis must be placed on fundamental aspects and common problems of health and disease while unnecessary details of specialisation should be avoided.

Community-based learning

The education process should also be community based rather than only hospital based.

Problem-based approach

Priority must be given to cultivating logical and scientific habits of thought, clarity of expression and independence of judgement and the developing the ability to collect and analyse information and to correlate them.

Active self-directed learning

Lectures are a poor means of transferring/acquiring information and even less effective in skill development and in generating the appropriate attitude. The use of active methods related to demonstration and on first hand experience should be encouraged. Students should be made to learn in small groups, through peer interactions. The curriculum objectives are to be taught in a setting of clinical relevance.

Teaching in patient setting

Education in clinical subjects should be learned primarily through interaction with outpatients, teaching in indoor wards at bedside, at emergency departments and within the community.

Logbook: Proper records of the work should be maintained which would form the basis for the students' internal assessment. These records should be available to inspectors at the time of inspections of the college by the MCI/ relevant authorities.

Integration: Maximum effort should be made to encourage learning through

integration among different basic and clinical subject areas using a "problembased learning approach". It should start with clinical or community cases, exploring the relevance of various pre-clinical and para-clinical disciplines in both understanding the problems and seeking a solution of the problem. Every attempt must be made to de-emphasize compartmentalization of disciplines so as to achieve both horizontal and vertical integration in different phases.

Group dynamics: Students must be encouraged to participate in group discussions and seminars. A discussion group should not have more than 20 students.

Vacation admissible: The vacation period to students in one calendar year should not exceed one month.

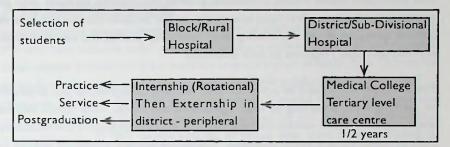
Adequate input faculty: To implement the curriculum in total, the State Government and institutional bodies [universities] must ensure that adequate financial and technical investment is provided.

Course duration and certification: The duration of the course will be the same as the existing Undergraduate medical education course in the country i.e. 4¹/₂ years plus a one-year compulsory pre-registration rotatory internship. The affiliated university will hold the qualifying examination and confer the degree. The State Medical Council/MCI will give registration after completion of internship i.e. the same as is followed in the existing system.

Course schedule: The proposed 4½ years of MBBS course will be divided in three phases:

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Phase-I	1½ years at the primary level health care level centres (Block Health Centres/Rural Hospitals) (Module-based).
Phase-II	1 1/2 years at the secondary level health care centres (District/Sub-Divisional Hospitals (System-based).
Phase-III	1 ¹ / ₂ years at a tertiary level care centre (Subject-based).



If the alternate/innovative system is introduced with courage and tempered by flexibility and creativity at least on experimental basis, then the traditional institutions would be willing to implement this integrated community-oriented medical education thus fulfilling the desire to produce socially-responsive health care providers.

In contrast to the existing curriculum, which is exclusively institutional in its delivery, the alternative proposes to structure the teaching, training and learning to occur in three sequential phases and at three different levels namely; "Community health Facility, District/Sub-Divisional [secondary level] Hospitals and finally at the Institution [tertiary care hospital]" for an equal duration of time of 1½ years each. In this proposed alternative model the students begin the learning process in the most peripheral level and get an opportunity to be acquainted with the real primary health-care needs of the community and to derive pleasure in deciding themselves the community's learning needs.

The concept of active student-centred learning may, thus, be encouraged, and that too through a well-structured modular approach addressing common health problems.

In the next phase, as they shift to secondary level health care facility, they can learn through a system integration approach to develop relevant problem solving skills with optimum utilisation of scarce resources.

Finally, in the last phase at the institution level, discipline based learning experiences are integrated with necessary insight into the basis for healthcare interventions either for individual patient situations or in the context of the community at large. This will be followed by the compulsory pre-registration training for one year when they will be detailed back to the more peripheral healthcare facilities where they would be trained and orientated towards discharging their duties as a first link health professional. This reversal, it is believed, would provide the learner with a more solid, comprehensive grasp of real life community settings as they exist, with a better understanding of the morbidity profile, the traditional health-related culture and beliefs prevalent in the society, the socio-economic context and people's accessibility to healthcare and affordability to the health services in terms of cost-benefit ratio.

This innovative model would, in essence, provide the medical students with an opportunity to acquire first-hand knowledge on the socio-economic and diverse cultural contexts of the community, their morbidity profile, the cause of their ailments and their response to such situations.

The students will be able to prioritize their learning objectives, to put emphasis on learning areas according to their significance and merit. They would also be encouraged to absorb various learning methods in order to acquire the necessary skills to solve relevant health problems. The unique learning situations offered to them would encourage them to use appropriate technologies in a rational manner in the diagnostic and therapeutic endeavours. The model also provides scope for involving the students in the different levels of healthcare delivery system.

If the students worked in teams in close rapport with the peri-medical and paramedical health personnel in discharging the various preventive, promotive and curative healthcare services, as set out in the alternative curriculum, this would effectively help them acquire team work skills which would aid their future careers as doctors. Further, it also appears that the community at large, once convinced about the transparency of the entire system, would also extend their fullest cooperation towards the successful implementation of this model.

This innovative model appears to be more cost-effective. Its implementation involves less monetary investment. It utilises the experiences and expertise of the basic doctors working at peripheral level health facilities who would be accommodated in the system as "non-core faculties". Further, the learners during their training periods would also contribute to the health care delivery system. All these are in addition to our expectations of more optimally achieving the broad goals of undergraduate medical education, i.e. the system would successfully produce socially responsive medical graduates, who would in no way be inferior in so far as the acquisition of scientific, technical knowledge and skills are concerned.

The alternative model would also prepare a better groundwork for future specialisation and research in the students who would be better capable of choosing future career options.

The mandate, therefore, is borne out of a deliberate and conscious attempt towards a quest for social relevance and need-based emphasis on community orientation in undergraduate medical education.

This, it is hoped, shall pose a demonstrable and obvious challenge to the status quo for potential future benefit of the medical education system at large.

2.14 New Situation:

Globalisation is now all pervasive. The financial institutions like World Bank and IMF who have become major players in health are utilising this era of technological development to enhance the private/commercial sector of health care. This has led to medical education now being considered as the production of commodity. However, the Tenth Five-Year Plan while giving a special thrust on science and technology (S&T) is trying to go beyond technology and work on those areas where benefits of S&T would include all those who have been excluded so far. Innovative technologies will be generated to meet the Indian needs and to persevere, protect and add values to inadequate resources, India's vast bio-diversity and its traditional knowledge.

It will provide creative and innovative solutions to health services, population management protecting our people from natural hazards and facilitate sustainable development. The Tenth Plan re-affirms the commitment to provide essential primary healthcare and emergency life-saving services under the national programmes free of cost to individuals based on their needs rather than their ability to pay.

To achieve this, re-orientation of medical education is essential both at undergraduate and post-graduate level. In the under-graduate level, it has to be needbased, community-oriented and problem-resolving.

The education should be extended beyond the four walls of medical colleges to the community. In the post-graduate education, the technological developments for diagnostic and therapeutic measures along with their limitation should be taught. Emphasis should be given on appropriate and innovative devices, which the community can afford. The technological advances should be rationally equated with clinical observations both for preventive and curative measures.

2.15 Health University:

Four states, Tamil Nadu, Andhra Pradesh, Karnataka and more recently West Bengal, have constituted universities for health sciences, bringing together all the medical colleges (Western medicine and those of ISM&H) under the jurisdiction of a single technical university. It intends to include different para-medical courses e.g., nursing, pharmacy, and dentistry along with post-graduate courses of all these disciplines. In the present system, their respective councils guide all these sections. The directives of the councils guide the course curriculum, evaluation procedure, qualification and selection of students. Universities are merely examination conducting and degree-conferring bodies and do not control the teachers' selection, their promotion, training, posting and transfers. The State Medical Councils have no link with the colleges and their teaching procedures.

The Primary objectives of these universities were administrative reforms, standardisation of the curriculum, uniformity in teaching and examination procedure. In Karnataka, the RGUHS has made some very important changes drawing upon the CHC's studies and other recommendations mentioned earlier. However, many state-sponsors and policy-makers have not yet fully explored the potential of this idea which could lead to an integrated approach to health manpower development in the state.

While there is scope to develop such strategy, the dangers of centralisation, the marginalisation of medicine/health from the general education system and the domination of clinical faculty at all levels must be avoided.

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The basic concept and objectives behind the establishment of University of health sciences have also not been conceived correctly. The idea was not to convert the directorate of medical education into a university, clubbing all medical and other colleges, but to develop a full team of health manpower from community level workers to tertiary level experts, public health specialist and researchers. This comprehensive health, human power development is still not been adequately addressed.

2.16 Market Forces influencing Medical Education

Medical colleges produce a product and that product is a doctor. The design and mix of the products can either be driven by market forces and demand or by diktat. In India, we do little to influence the mix of products produced by the medical colleges, the distribution of numbers of seats in various disciplines is generally governed by the status of the concerned discipline as is the quality of raw material that opts for the discipline. If those that are left over and could not get admission into any of the more prestigious subjects continue to settle for public health related disciplines, the quality of human resources in public health will continue to be poor and this will perpetuate the low status of the discipline. This in turn will have repercussions on the benefits that accrue to the people who need efficient health care delivery, especially in regard to preventive and promotive health services.

To improve the quality of public health personnel, the prestige and status of the discipline needs to be improved. This has been attempted by various means in the past, most frequently with negative rather than positive consequences. It is naïve to think that changing the name of the subject will confer a magical mantle of prestige on those who teach or study the discipline. If better and more human resources are to be drawn towards public health, a systems change will have to be made in the organisation of healthcare in the country.

3.0 Recommendations

In response to the complex factors that are actively distorting the role, scope, objectives and context of medical education today, it is believed that with collective commitment, this disturbing trend and distortion can be reversed. The following agenda for action is recommended.

1. National Health Human Power Development Commission

A National Health Human Power Development Commission should be established. This will bring together the apex bodies of all categories of health professionals (being the central council of all systems of medicine), representatives of key National health training centre and the trainers and co-ordinating agencies of the voluntary sector, to initiate a process of need-based and data-based integrated health human-power development planning, responding to health care needs rather than market expectations.

2. Medical College ban

A comprehensive ban on new medical colleges and the expansion of existing medical college capacities till the problem of commercialisation and capitation fees is adequately monitored and controlled. Mega-educational efforts (colleges with 150-500 seats) should be encouraged to improve their quality and standard by reducing the number of seats to no more than 100.

3. Experiment on Alternative MCI Proposal

The Government of India (GoI) should accept and direct the State governments to implement the Medical Council of India's proposal of Alternative/Innovative Under-Graduate Medical Education in India, which is currently with the Health Department. MCI should prevail upon GoI for its implementation. MCI could also initiate dialogue with the states which have their own health universities, where such alternative tracks and innovations could be more easily supported.

The MCI in concurrence with Gol could give autonomy to the selected and willing medical colleges with the alternative parallel curriculum, especially geared to primary health care, public health and general practice. These institutes may be permitted to adopt the proposed alternative/innovative model by MCI.

Ongoing efforts should be made nationally, for example the introduction of Ethics as a separate subject with a prescribed text book in RGUHS – Karnataka; experiments with gender re-orientation of medical education by Achutha Menon Centre in Trivandrum and other smaller curricular experiments should also be reviewed and widely promoted.

4. Stricter Quality Control

The MCI, after obtaining its regulatory power by the Act of Parliament, should be more vigilant against the commercial distortions and any fall in standards.

- a. Its inspection team should include representatives of the state governments, universities and state medical councils when sanctioning new medical colleges, for deciding the quantum of admission and opening new medical education courses.
- b. The MCI headquarters should build up a small professional core team to help the MCI make decisions on medical education based on comprehensive data and evidence.
- State medical councils should be strengthened to prevent a slide in standards.

5. Examination Reform

The MCI and health universities should promote examination reform by introducing safeguards that prevent the operation of money/political influence and encourage the proper selection and orientation of examiners, to prevent irresponsible and unethical practices in the examination system. Examinations should be based on the continuous evaluation of the students followed by summative examination at the end of each phase. The experiments by other institutions could be reviewed and emulated all over the country after formulating a rational and effective methodology.

6. Continuing Education

Distance learning schemes for doctors and other members of health teams must. be encouraged so these staff can update their knowledge and improve their skills. This should be linked to the process to accreditation, service promotion and career development. Links with the Open University system would greatly facilitate this process. Professional councils and associations have already endorsed this idea.

7. Reorientation of post-graduate education

The reorientation of all post-graduate education towards the goals of the National Health Policy and primary health care, and enhanced commitment to post-graduate training in public health and allied disciplines.

8. Strengthening Public Health in India

The Strengthening of public health education in India is urgently required. The neglect of public health training has been a costly mistake and needs urgent attention. Experiments by National Institute of Epidemiology, Chennai; SCTIMST Trivandrum; CMC – Vellore, in the areas of public health and epidemiology should be urgently reviewed. Simultaneously, a review of reputed centres like AIIHPH

- Kolkata, including their decline, should be initiated. Both these efforts supported by ideas from a large number of innovative community health training experiments in the voluntary health sector in India could lead to the evolution of a new public health course in the country, going beyond biomedical techno-managerialism to a framework deeply contextualised in the social – economic – political – cultural determinants of health. A National effort to evolve such a course and offer it through a wide variety of existing institutions all over the country is an imperative. Linked to this would be the development of an all-India Public Health Cadre to strengthen the public health services in the country.

9. Promotion of Health Research

Promotion of research in health systems and in health manpower development is urgently required. Pooling the resources of national organisations like the MCI, Indian Council of Medical Research and the National Academy of Medical Sciences, to ensure that reorientation and reform is practised, field-oriented, etc. is necessary. In addition, efforts to strengthen the ethical framework of research based on the new ethical guidelines evolved by ICMR in collaboration with NHRC through institutional ethical committees should be actively promoted.

10. Regulation of Private Sector

Setting up a National think-tank to undertake a detailed review of the healthcare private sector and medical education in the country is crucial to identify how the two sectors should be regulated. Regulation is necessary to maintain standards and technical excellence as well as to enhance its contribution to the healthcare needs of the country and the goals of the National Health Policy.

11. Health Team Training

While the medical education sector needs continuing reform, its domination of the health human-power sector should be balanced by a new focus on environmental health, public health speciality, nursing, multipurpose communitybased health workers and allied health professionals, encouraging re-orientation and strengthening quality enhancement in training all these cadres. The emphasis should be on skill development and social/community orientation.

12. Health Universities

- Assess the functioning of the health universities already in existence and decide whether they have been beneficial for its objective. If found beneficial, then this concept and their successful experiments should be promoted more widely.
- Finally, a strong countervailing health-oriented movement needs to be initiated by health and development groups, consumers and people's organisations, that will enhance the role of the community, patients, consumers and the parties in the entire debate on reform in the health and medical sector. Change has been directed and controlled for too long by professional needs, rather than people's health needs.

4.0 Paramedical Training and Education

Training and education of all kinds of health personnel are instrumental to healthcare delivery.

Since Independence, various National programmes have recommended and trained health workers with specific programme related functions. These have included the basic health workers for malaria; vaccinators for small pox programme; sprayers for malaria programme; assistants or family planning, trachoma and other programmes. Auxillary Nurse Midwives (ANMs) were also inducted into the Mother and Child Health related programmes and family planning. In the early 1970s, the Kartar Singh Committee Report recommended that all the above unipurpose male and female health workers belonging to different programmes should be re-trained and reoriented to become multi-purpose health workers, carrying out various functions in an integrated way at community level relevant to all the programmes.

The concept of the male and female Multi-Purpose Workers (MPWs) and male and female Health Supervisors (HS) evolved in the 1970s and changes in the curriculum and training institutions took place. Meanwhile, in the voluntary sector, many projects such as Jamkhed and Miraj (Maharashtra); Deenabandhu, RUHSA, VHS – Adyar, and KSSS (Tamil Nadu); and many others all over the country demonstrated the potential and successful induction of community health workers especially women in community health action. The Jammu & Kashmir government started the Rehbar-e –sehat project inducting school teachers. Based on many of these experiments, the Shrivastava Report (1974) recommended the role and importance of community based health workers in health programmes for the people.

This was subsequently formalised into the Jana Swasthya Rakshak programme of the Janata Government under Raj Narain and introduced into many states in the country. This was aptly supported by the ICMR and ICSSR reports in 1981. Due to political exigencies, professional neglect and lack of sustained policy support and initiative, a large number of the CHWs trained and available in the field became gradually non-functional.

Today, due to a legal requirement, a small number of them continued to draw monthly stipend but are non-functional in every other way. This excellent proposition failed because it was planned and implemented in a top-down manner. The programme came as a mechanical directive, the recipients remained in dark about the scope and limitations of the scheme.

Specific definitions of different categories of such health workers will be beneficial for operational purposes. They can be classified into three broad groups.

4.1 Para-Professional

These are voluntary workers from the community without a structured organisation for them. These voluntary activists should receive training and some recognition from the community and the local self-government. Community Health Volunteers/ Guides (CHV/Gs) and Traditional Birth Assistants (TBAs) were recruited with this idea. They became structured and trained health workers. Both these groups can be optimally used under community control.

Many state governments such as Madhya Pradesh and Chatishgarh are initiating such schemes in various towns. Their efficacy and sustainability should be objectively reviewed and be duplicated, if possible, commensurating with regional situation under community control.

More recently, the Ministry of Health, Gol, along with WHO-SEARO and a network of community and women's health resource centre have initiated women's health empowerment training with the aim of initiating a process of women's health empowerment through identifying local women leaders. All these experiments have met with different degrees of success.

Recent studies of the JSR Scheme in 1997 and 2001 have indicated that while such community-based health workers have great potential, they need to be initiated with greater community preparation and involvement, with comprehensive problem oriented training and good supportive supervision linkages with the public health system. It is this community control and anchoring that is vital for their optimal utilisation.

4.2 Peri-Medical

These workers are attached to the health delivery units providing indirect service. They are General Duty Assistants (GDAs), sweepers and Group C workers (clerks, accountants, storekeepers, ward-masters) and non-medical technical hands. While they have been neglected, these peri-medicals could play an important role in both preventive and curative services. They should be motivated and trained to optimise the function of the respective units they are attached to.

4.3 Para-Medical

They are structurally constituted health personnel associated with preventive, promotive and treatment procedures. They are nurses of different categories, social welfare/extension officers, pharmacists, computers (workers), technicians of different categories e.g., laboratory X-ray technicians, ophthalmic assistants, physiotherapists etc. In addition, there are multi-purpose workers both male and female mentioned above and ANMs.

4.4 Recruitment and Training

Para Professional

At present, recruitment and training for para-professionals are carried out in an unsatisfactory way. They should be recruited and trained at gram sansad/panchayat level. The training will allow them to gain access to general health information and educate the staff to record events concerning health in a neighbourhood participatory manner (a continuous process) and initiate health consciousness/ movement. Sub-centres, primary schools, gram panchayat and municipality premises can be used for training of para-professionals (structured and non-structured).

Peri-Medical

For peri-medicals, training should be conducted in the healthcare units and the administrators of such units have to plan for their training.

Para-Medical

Para-medicals' training and teaching of Multi-Purpose Health Workers (MPHWs):

This very important group is not properly trained and utilised. For effective utilisation of healthcare, these MPHWs are the cornerstone of the pyramid. The existing modality has to be thoroughly revised.

- (a) Their total administrative control should be vested with the panchayat samiti i.e., recruitment should be done from the locality with the recommendation of Gram Sabha/Gram Panchayat.
- (b) The course, curriculum and training modality should be designed keeping regional need and variation in mind. Understanding of health culture and assessment of home medicines and community health practices should be rationally included in the curriculum.
- (c) The training centres should be situated at the Block PHC (BPHC) or Rural Hospitals giving more emphasis on practical work and community service;
- (d) In the BPHC, CHC/Rural hospital, doctors and senior social workers in consultation with Panchayat Samiti will undertake the training programme;

(e) The training should be a continuous process.

Similar training for this lowest tier of structured para-medicals working in the municipalities, corporations or State organisation as health assistants and their supervisors should also be undertaken.

In the rural areas, these MPHW's are supervised and activated by (a) Supervisors, (b) Sanitary Inspectors (SIs)/Public Health Nurses (PHNs) and (c) by Block SIs and Block PHNs.

The functions and responsibilities of this group of para-medical staff requires an in-depth assessment of their work and responsibilities. It appears from the present situation that too many tiers of supervision are muddling the entire purpose and retarding the performance as per Parkinson's Law, causing administrative inaction. If the control and supervision is vested in community through panchayat and Nagar Palikas, then these para-medicals may be trained and utilised for better purposes e.g., for monitoring, survey, resource identification and utilisation.

At present, in addition to these three tier supervisors, there are social workers/ officers/extension educators and computer persons (one or two for every block units). These para-medicals are not utilised properly. Their job descriptions are complex and bureaucratic. These para-medicals, if trained, can work in the preventive and promotive healthcare with some curative responsibility. Subsequently, their services may not be needed at all when Panchayat takes over the control.

These qualified para-medical staff should get the following knowledge during their training:

- A. (i) Social orientation, (ii) method of interaction with the community, (iii) health culture, rational understanding about traditional medicine and home medicine;
 (iv) the broader intersectoral determinants of health.
- B. They should be informed about the existing infrastructures and the working procedure of their superior and subordinate workers.
- C. They should be informed about the state and National projects with critical analysis. Para-medical staff must have a basic grasp of disease prevalence and an understanding of measures for its prevention, as well as having the ability to manage simple ailments for a fixed time before referring cases to suitable units

4.5 Technicians

The role of technicians in hospital service cannot be over-emphasised. Unfortunately, these groups of para-medical workers are not properly trained and their importance is underestimated. These para-medical personnel may be grouped as follows:

- A. (i) Laboratory Technicians:
 - (a) Microbiology -- with sub-groups like mycology, virology etc.
 - (b) Histo-pathology -- sub-groups like cytology, cytogenetics, histochemistry, tissue-culture etc.
 - (c) Haematology -- genetic study,
 - (d) Biochemistry.
 - (ii) Radio-technicians (a) radiology, (b) radio-therapy, (c) ultra-sonography,
 - (iii) Ophthalmic assistants -- optimetricians,
 - (iv) Dentistry and dental surgery technicians.
- B. Special technical assistants -- who will be able to operate
 - (i) perfusion technology
 - (ii) heart lung machine
 - (iii) ventilators, respirators, fibrilators etc.
 - (iv) Different types of sophisticated machines needed for cardiology, neurology/ surgery.
 - (v) Specialised investigative procedures like CT Scan, MRI etc.

For ordinary health care, sophisticated training is not needed but there should be provisions for training of such personnel, including motivation for socially needed application of such investigation.

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5.0 Nursing Education and Training

Nurses remain the most important of all para-medical personnel and as such, this constituent part of the healthcare delivery team requires special attention.

Over the years, India's health structure has undergone fundamental changes. Similarly, the nursing service has metamorphosed from having no formal system of nursing education to institution of more than 1000 (GNM 739+ANM 340) nursing schools and thirty (30) colleges affiliated to the universities.

Initially, nursing care was a part of medical apprenticeship. Gradually, this was separated from the main system as an auxiliary service for the benefit of the doctors but not of the recipients. Ms Hewlett (1886) began training 'Dais' who conducted deliveries. They were self-appointed but accepted by the community in a formal way. The Victoria Memorial Scholarship was established and Madras began registering nurses and midwives. In 1918, the School for Lady Health Visitors was started at Delhi. Before Bhore Committee report (1946), general nursing midwifery and community health nursing (for the cadre of L.H.V) had three separate courses.

- Today, there are several levels of nursing education in India:
 - 1. Schools for ANM and MPHW (female). Training period is 11/2 years.
 - 2. A three and half year's diploma course in General Nursing (GNM) and a fouryear B.Sc. (Nursing). The requisite qualification is higher secondary completion certificate.
 - 3. There is also a two-year post basic (diploma/certificate) course. It is also available for clinical specialities, administration, education and B.Sc. nursing.
 - Post-graduate programmes include M.Sc. and M. Phil in nursing and Doctorate / Post-doctoral programmes can be taken in allied subjects in several universities. There are five colleges, which offer M.Sc. in nursing.

The status of nursing services in India has been depicted under Table-1.

SI. No.	Type of Course	No. of Institutes	Duration of Course	Admission Requirements	Annual Admission (Number)	Annual Turnover (approx.)
T	Certificate					
	a)General Nursing & Mıdwifery	739	3½ years	12 yrs of schooling	9000	7256
		(776355)				
	b) Auxiliary Nurse/ Midwifery	340	1 1/2 years	10 yrs of schooling	9083	4264
		(419077)				
2	Degree				1	
	a) B.Sc.(Nursing)	15	4 years	10+2 yrs of schooling with science subjects	250	219
	b) Post Basic	10	2 years	Registered Nurse and Midwife+2 years	230	123
	c) Masters in Nursing	4	2 years	B.Sc. Nursing+3 yrs experience	65	32
3	Diploma					
	a) Physchiatric Nursing	1	1			25
	b) Nursing Admin. & Nursing Edu.	2	10 months	Registered Nurse and Midwife+2 years		167
	c) Public Health Nursing	5			1	109

Table-1. The position of Nursing Education in India (2001)

Source : Health Information of India, 2001.

Despite the number of schools and training programmes, the results are far from satisfactory. The total number of nurses (all categories) is 11,95,438.

5.1 Some Challenges

In 1963, Indian Council of Nursing set out to revise the GNM course with the assistance of WHO in recognition of the changing role of nurses and ANM. In 1982, the syllabus was revised again with the changed needs of society. These changes were implemented to develop India's nursing service as a paralleled one but without a holistic attitude. This parallelism created more complexity in the healthcare system rather than resolving the problem and optimising the benefit to the service as a whole.

With all these opportunities to elevate their position (although very limited), the nurses continue to be kept subservient to the doctors. The entire course and training becomes useless for them in the practical field where their main activities remain clerical and minimum patient care.

This problem has to be dealt with much care and pragmatism. It appears that:

- (i) The theoretical training is too academic. The nurses seldom get the opportunity to utilise their knowledge as they have to follow the direction of the doctor. They do not have any right to contradict and advise the doctor even if they find the direction is erroneous.
- (ii) Nurses are not allowed to perform medical examinations except examination via naturalis, in obstetric cases. They are not allowed to undertake any obstetric operation/manipulation, including simple procedure like IV transfusion, episiotomy and its repair.
- (iii) In cases of abortion and post-partum haemorrhage, they are only allowed to give intra-muscular oxytocin injection.
- (iv) They are not allowed to drain an abscess.
 - As this is the situation, either their training period should either be shortened and rationalised or they should be allowed to practice these simple management/treatment procedures.
 - From the GNM, there should be special training for operation theatre and labour-room duties and these trained staff should not be transferable to general duties.
 - Special training of nursing staff to work in specialities like paediatrics especially for neo-natal service and for super specialities of cardio-thoracic surgery, neuro-surgery, plastic surgery etc, should be introduced to institute better performance of these specialities.
 - The nurse-patient ratio at present is 1:5, which appears to be inadequate. To increase the number of nurses, introduction of short courses and day scholarship should be considered. The theoretical courses should be reduced placing more emphasis on practical management of the patients and their care.
 - It is also suggested the GNMs and other categories of nurses should be allowed to perform curative services prescribed in a structured manual e.g., application of low forceps, episiotomy and its repair, draining of abscess, repair of injuries, administration of transfusion, lumber puncture, draining of peritoneal fluid etc.
 - The old cadres of public health nurses and lady health visitors have gradually disappeared. Serious consideration much be given to reformulate training for such community-based nursing professionals, who would need to build capacities of ANMs and community health workers as well as supervise them.

5.2 Working Conditions

- (i) Working conditions for the nurses are usually poor. There is a general sense of indiscipline in hospitals, which has seeped in among the nurses as well. As a result, many nurses are:
- (ii) Refusing to perform night duty and basing their refusal on flimsy excuses. If forced to do, they create pressure from higher authorities, political leaders etc.
- (iii) Refusing to do ward duty and demanding duty in OPD, OT and PP Unit, where duty hours are maximum 4 hours. For this, there is tremendous pressure from various concerns.
- (iv) Refusing rotation among heavy and light wards. Nurses with support from various backgrounds press for light duties.

5.3 Private Sector

It was also mentioned that the standard of nursing in the private sector is poor. Some nursing homes even conduct short, substandard 'nursing' courses and appoint virtually untrained persons on low salaries, as nurses. This issue has not been studied adequately. Nursing Councils, local bodies and state health authorities need to examine the functioning of such institutions in the private sector, in order to protect the interests of patients.

5.4 Training Institutions Nursing Colleges

In recent years, there has been a phenomenal increase in the number of nursing colleges and nurses' training programmes. This rise has been made possible by commercial and market economic factors rather than rational and evidence-based human power development. It has led to a major decline in standards with many colleges and nursing schools not having the minimum requirements prescribed by the Nursing Council in terms of college facilities, equipment and teaching staff. Many have started in school buildings and other such locations not at all suitable for nursing education. Surprisingly, many have also been started without proper linkages to hospitals. In nursing education, adequate exposure to hospital and patient care is a basic and essential requirement. It seems that even this being compromised nowadays.

Such lowering of standards has led to a very poor quality of nursing staff being produced, in recent years, from these new colleges. The Nursing Council and Health Ministries like the Medical Council mentioned earlier should not allow clandestine financial transactions and political interference to determine the growth of nursing education in the country. A moratorium on further expansion of nursing colleges is required till these commercial distortions and falls in standard are adequately addressed. In the absence of that, short term gains of larger numbers of nursing professionals will be offset by the long term crisis in health care quality. The Indian Nursing Council and the State Nursing Councils should be given greater power to enable them to regulate the standard of education and training of nursing courses. The Ministry of Health and Family Welfare and the state governments should consider providing these bodies with greater powers and finance so that government and private sector nursing services and personnel are properly regulated.

ANM Training Schools

The standard in ANM training schools needs to be improved. Inducting qualified and trained teachers, using appropriate teaching aids and constructing proper buildings can do this.

There is an urgent need to review the essential physical, educational and fiscal requirements of ANM schools and ensure that these are provided. Presently, facilities like space, equipment, library, funds etc., are inadequate. In some institutions, ANMs are not even trained to conduct normal delivery cases; in fact some ANMs have qualified without conducting a single delivery case. Studies show that a majority of the deliveries, in rural areas are conducted by trained or untrained dais; reportedly very few deliveries are conducted by ANMs.

Field training facilities should be enhanced substantially, to enable trainee ANMs to perform a sufficient number of normal deliveries and obtain training in the specific functions that they are expected to perform at a sub-centre. Their training should be community-based. They should be provided hands-on training so that they can conduct home deliveries adopting the appropriate technology (traditional method of delivery is scientific and beneficial to the mother).

There is a shortage of teachers in ANM training schools. Usually, staff nurses are posted as faculty members at the training centres without having any teaching experience. Often doctors associated with local hospitals are requested to take classes on an ad-hoc basis. This causes more harm than good. There are hardly any reorientation courses to update the knowledge of faculty members. What is true of ANM schools is also true of other nursing institutions. There is a pressing need to review the academic content of courses in order to strengthen Nursing Education.

5.5 Nursing Professional – the way ahead

The main reasons for substandard patient and community care are: substandard training, especially in the staff nurse-midwife, and ANM courses; the lack of a proper

system of training; and the absence of regular reorientation courses.

Varied courses need to be developed so that nurses can be independently entrusted with patient care (especially of chronic cases), and some areas of community care. This will improve the quality of patient and community healthcare and will be a step towards achieving the goal of Health for All. Indeed, the nursing profession can play a major role in this respect. The Committee recommends the following recommendations to improve the nursing and ANM education in the country:

5.6 Recommendations Nursing

- The Indian Nursing Council and State Nursing Councils need to be revitalised, empowered and liberally financed, so that they can regulate the standard of education and training of courses in the country. The syllabus of all courses (for instance, staff nurse-midwife, B. Sc. (Nursing)) should be standardised. Minimum requirements for conducting training should be laid down and enforced, as has been done by the Medical Council of India.
- The Chairperson/President of the Nursing Council of India and State Nursing Councils should be from the nursing profession and not any other field. The system of the Director General of Health Services and State Director of Public Health/Health Services serving as Chairperson/President should be abolished.
- 3. Continued education and reorientation training courses should be introduced for all categories of nursing personnel. This needs to be taken up in the private sector as well as through the TNAI and its branches.
- 4. Proper working conditions for nursing personnel must be provided. Service conditions, including promotional avenues of nursing staff, should be improved.
- 5. The workload of every category of staff, sanctioning of bed, doctor-nurse-bed ratio should be prepared and maintained.
- 6. Assessment of performance of the staff at every stage should be made.
- Conceptual consideration of the nursing service has to be rationalised for optimisation of different categories of nurses.
- 8. Their education and practical training must be need-based, specific job oriented and pragmatic.
- 9. The training system for all grades of nursing staff must be made more scientific and effective.

ANM Training

 A system of regular evaluation of educational courses for ANMs and staff nurse-midwives needs to be introduced in all states and at central level. All institutions should be periodically inspected to ensure that prescribed teaching

- 2. Sub-centre buildings should be built within the boundaries of the village, for the convenience of the people and the safety of ANMs.
- 3. As far as possible, ANMs should be posted in their home villages. This will solve the problem of safety and timely attendance.
- 4. The present workload of ANMs needs to be rationalised and reduced, taking into consideration: the population to be covered, distance to be travelled, type of terrain to be covered and services to be rendered.
- 5. In difficult and vulnerable areas (hilly, desert and coastal areas), the population to be covered by one ANM should be specifically determined, so as to ensure that the ANM is able to effectively discharge her functions and duties. States and local panchayats should decide this, rather than Central government.
- 6. The M.P.H.W. scheme should be continued and revitalised and MPHW training should be re-oriented and re-modelled. The training must be needs-based and commensurate with the health culture and rational health practice of the community, especially for the tribal people.
- 7. For tribal areas, MPHW should be re-oriented and recruited from the tribal community and posted in tribal areas. The qualification will be up to classVIII for the tribal people re-oriented especially to work in tribal areas. This has to be introduced immediately and could possibly be for a limited period.
- 8. Involvement of Panchayat/Municipal Bodies in looking after the smooth and effective running of the Health care service should be ensured.
- 9. Village health committees should be established in each village and proper liaison established with the ANMs, so that essential programmes are planned with certain objectives and aims (rather than target-oriented programmes from the top).

6.0 In Conclusion

All these health human power development recommendations and changes can not take place unless there is a strong demand for radical change from the community level and on behalf of the community by civil society.

India urgently needs a strong countervailing health-orientated movement by health and development groups, consumers and people's organisations, that will enhance the role of the community, patients, consumers and the people in the entire debate on reform in the health and medical sector. Change has been directed and controlled for too long by professional needs, rather than people's health needs.

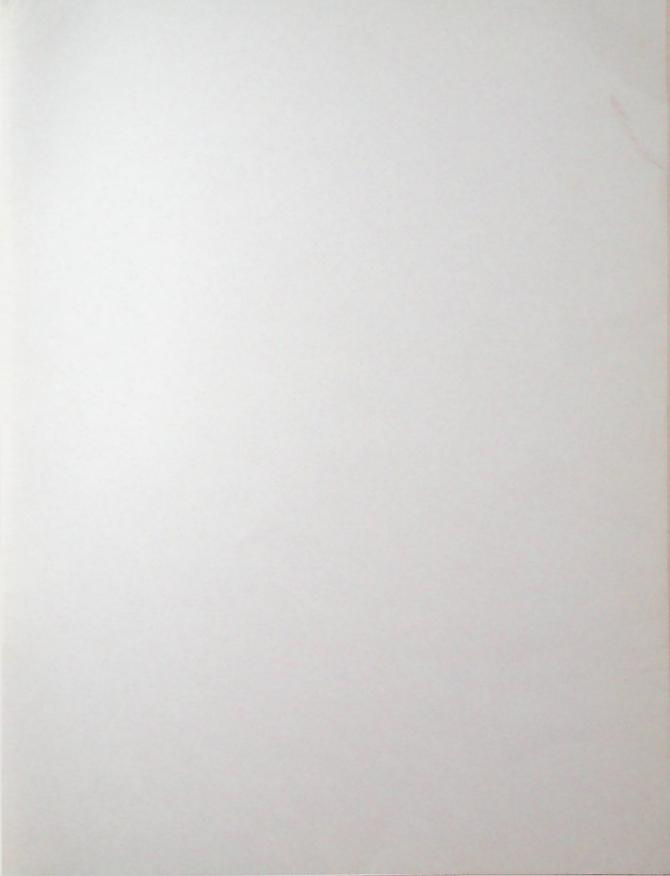
- For decades, networks such as, Voluntary Health Association of India, The Catholic Health Association of India, Christian Medical Association of India, Medico Friend Circle, All India Drug Action Network and Asian Community Health Action Network have tried to play this role by bringing together the energies and perspectives of civil society in the country since 1970s. The health movement organised by Jana Sastha Committees and Jana Sastha Chetana Prachar Samannay Committee in West Bengal is trying to initiate health movement encompassing mass organizations like Krishak Samities, Trade Unions, Women's Organizations (Mahila Samities), Organizations of Youth and Students along with various voluntary organizations like Paschim Banga Bigyan Mancha, Indian Medical Association (IMA) and Association of Service Doctors (of all disciplines) in a single platform. This Jana Sastha Chetana Prachar Samannay Samity instituted the National Health Assembly in Calcutta in 1999, where people from all walks of life participated.
- The setting up of the Independent Health Commission in India by VHAI and its first report by its members and associates in 1997 was an another step in this direction to provide a countervailing independent pressure group on health sector reform in the country.
- Finally, in December 2000, the evolution of the Jana Swasthya Abhiyan (People's Health Movement – India) linked to the Global People's Health Movement that emerged from the first National Health Assembly (Kolkata, December 2000) and first global People's Health Assembly (Gonoshasthya Kendra, Savar, Bangladesh, December 2000) has created new possibilities for strengthening the movement towards health for all in the country. Bringing together 18 national networks including VHAI, the Jana Swasthya Abhiyan is gradually evolving into an influential movement with an increasing presence in many states.
 - The Indian People's Health Charter which evolved in Kolkata as the manifesto of this new movement included the following major demands in the context of health and medical education:

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- A comprehensive need-based human power plan for the health sector should be formulated that addresses the requirement for creation of a much larger pool of paramedical functionaries and basic doctors, in place of the present trend towards over-production of personnel trained in super-specialities.
- Major portions of undergraduate medical education, nursing as well as other paramedical training be imparted in district level medical care institutions, as a necessary complement to training provided in medical / nursing colleges and other training institutions.
- No more new medical colleges to be opened in the private sector.
- Steps be taken to close down private medical colleges which charge fees higher than state colleges or take any form of donations. Illegal private tuition by teachers in medical college must be stopped.
- At least one year of compulsory rural posting for undergraduate (medical, nursing and paramedical) education to be made mandatory, without which license to practice will not be issued.
- Similarly, three years of rural posting after post-graduation be made compulsory.

(Source : People's Charter for Health, reprinted by VHAI, 2004)".

While these new commissions and movements are beginning to be taken seriously by the government, which is a very positive development, much more needs to be done to enhance the community – health system dialogue by the planners in the country.



The Independent Commission on Development and Health in India

The Independent Commission on Development and Health in India (ICDHI), formerly known as The Independent Commission on Health in India (ICHI), was formed in 1995, facilitated by Voluntary Health Association of India. The commission, comprising of distinguished people from the development and health sectors, aims at assessing the development and health situation of the country through policy research and analysis. in-depth surveys, focus group discussions, public hearings, round table conferences with developmental workers, policy makers and people, particularly disadvantaged community at large. By means of participatory process, the Commission seeks to identify the maladies impending the development and progress of the country and come out with clearly defined solution to the problems identified. The Commission works closely with the Prime Minister's Office, Ministry of Health & Family Welfare and Planning Commission within the government, and reputed Research organizations, Non-government organizations, Panchayati Raj Institutions at the grassroots as well as other relevant forums . The first report of the Commission was released by the Prime Minister and was presented to the President. The report was discussed in the Parliamentary forum. ICDHI's constant endeavour has been to facilitate the process of need based and people-centric sustainable development.



The Independent Commission on Development & Health in India

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