MEP - 18

PERSPECTIVES IN MEDICAL EDUCATION

A REPORT PREPARED FOR

THE INDEPENDENT COMMISSION ON HEALTH IN INDIA

DECEMBER 1995

SOCIETY FOR COMMUNITY HEALTH AWARENESS RESEARCH AND ACTION

BANGALORE - 560 034

INDIA

REORIENTATION OF MEDICAL EDUCATION

"The implementation effort must be bold; half hearted attempts to make changes without really changing will be expensive and destructive. Not only is there no point in waiting, because the eventual change of health care system is certain, bue delay will contribute to very avoidable misery and death. A timid approach will harden opposition, waste resources and discredit the strategy. We are about to take a quantum leap into an eminently attainable new era in human development: we should be careful to lose neither our will nor our way....."

WHO - SEARO (1988)

PERSPECTIVES IN MEDICAL EDUCATION

CONTENT LIST

STATISTICAL TABLES AND OTHER DATA

[NOTE: It has been very difficult to get comprehensive, authentic and current information on all aspects of Medical Colleges in the country from Governmental / Official sources. Surprisingly data is contradictory and incomplete. We have used a Private Published guide (1994), used by students seeking Medical College admissions in the country. This has been supplemented or integrated with data available from Government and Professional Publications. It has not been possible in the time available to cross check the data against official statistics. The overall trends, however have been interpreted with necessary caution].

FOREWORD

This report, prepared for the Independent Commission on Health in India, by the Society for Community Health Awareness, Research and Action, brings together, over a decade of involvement, in evolving alternative perspectives on Medical Education and Health Human power Development. Our efforts have been geared to making these more relevant to the health needs of our people and more relevant to our times.

More specifically, the report draws extensively on the findings of an interactive research project, initiated in 1990, to study the Indian experience in evolving strategies for Social Relevance and Community Orientation in Medical Education.

The research initiative focussed on a wide variety of experience, collating data and ideas through a multipronged, data collection, methodology. This included:

* *Experts*: A study of recommendations from Bhore Committee report (1946) till the Draft National Educational Policy for Health Sciences (1989).

* Institutional initiatives: A survey of medical college initiatives and a field study of seven pace-setter colleges.

* Experience in the Field: A Survey of feedback from young medical graduates with work experience in peripheral rural hospitals and health projects.

* Training Alternatives: A study of alternative training experiments in the Voluntary Health Sector.

* Dialogue with innovaters: A series of dialogues with the key initiators of experiments within the 'medical college system' and the voluntary sector

* Social context: In addition, the society also undertook a comprehensive Policy Delphi Survey on the Social, Economic and Political trends in the country having an impact on Health and the health issues and challenges emerging in this context. The scenario forecast by this exercise has been kept in context while evolving this report and its recommendations.

This report draws extensively on these research initiatives, supplemented by data and reports collected on the situation, after the Society was requested to report on the theme, to the Commission.

In keeping with the Independent Health Commission's terms of reference

i) to 'identify the maladies affecting the present health care system' and

ii) to 'provide pragmatic and people oriented solutions'.

the report has attempted to provide background for both these objectives.

In the foreword to the Society's Project report, February 1993, Prof. V. Ramalingaswami, Chairman, Task Force on Health Research for Development, WHO - Geneva, had observed that "the principles of educational reform may be applicable globally but the solutions have a location specificity. The intrinsic elements of the change process are the teachers, students and the institutional framework; the extrinsic elements are political will, administrative commitment and social pressure".

All these elements have been reviewed and dealt with in this document.

The subject of Medical Education and its social and community orientation has been a subject for discussion, dialogue and policy concern since Independence and perhaps even more concertedly since the Srivastava Report of 1974. Much has been written, but the problems and obstacles to change remain and the crisis of the widening gap between needs and expectations versus the actual ground realities is becoming more acute day by day.

The report therefore tries to focus on key issues of concern and key components of immediate action. It attempts to be brief and provide a practical rationale for change.

THE TIME FOR RADICAL AND CONCERTED ACTION IS NOW!

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December, 1995

1. PREAMBLE

1. The Goals of Medical Education, in the country, have been clearly defined and endorsed throughout the last five decades since Independence.

* The 'Social Physician' of the Bhore Committee Report (1946) and the Mudaliar report (1961);

* the 'Basic Doctor' of the Patel report (1970);

* the 'Family and Community Oriented general practitioners with social responsibility' of the Srivastava Report' (1975)

* the 'community oriented physician for comprehensive health care' of the ICSSR / ICMR Health for all Report (1981); and

* the 'Community Physician' of the recently drafted National Educational Policy for Health Sciences (1990);

have all underlined the acute need of a new type of doctor, that we need in this country.

2) The 'Institutional Framework' for achieving this goal have seen a massive quantitative expansion since 1947.

* From 25 colleges producing 959 doctors in 1947-48 to around 145 colleges producing over 14,000 doctors in 1993-94, recording a 600% expansion in nearly five decades.

* The quantitative expansion, is equally significant in a global context, with India having 10 percent of the medical colleges in the whole world (over 140 out of 1400 colleges).

3) The 'Curriculum Reorientation' recommended by Medical Council of India, (the apex National body set up to evolve norms and guidelines for medical education in the country), has also seen a continuous process of change.

* The introduction of the subject of Preventive and Social Medicine (now extending in its framework from preclinical years to the final year);

* the evolution and organisation of rural and urban field practice areas that provide opportunity for training beyond the teaching hospital;

* the evolution and organisation of the Compulsory rotating internship after the final examination, which includes 3/6 months of community based postings;

are three important and significant reforms, among many others, endorsed and recommended to medical colleges, towards the goal of producing 'basic doctors'.

4. The populist rhetoric of Doctors for Rural Areas has become an integral part of policy formulation; political party manifesto; social exhortation at every level; and media and professional reflection and debate - not showing any decrease in intensity over 40 years.

5. **POLICY GAP**

However inspite of
a) clarity in the stated goals of policy;
b) phenomenal quantitative growth in the institutional framework;
c) some efforts to qualitatively reorient the curriculum to match the policy goals; and
d) the enhanced populist rhetoric;

the situation of medical education in the country has moved towards greater and greater crisis.

i. The majority of the young doctors still opt for urban hospital and urban clinic practice and the trends towards specialization are high.

ii. The vacancies in rural and peripheral community based health centres and hospitals in the government services have reached significant proportions.

VACANCIES IN HEALTH CENTRE

"The State of Maharashtra which accounts for almost one fifth of the total national out turn of doctors annually, has about one-fourth of the sanctioned post of doctors at PHC's lying vacant as of 1st January of the current year. Uttar Pradesh with seven medical colleges has forty percent of similar posts lying vacant ....."

Bajaj , 1994 (13)

iii. Professional preoccupation, both at 'practitioner' and 'educator' levels continue to be with illness care at secondary and tertiary level centres, rather than with the challenges of care at the primary health / community levels.

iv. Finally since the late 1970's there has been an emergence of a large number of

disturbing trends in medical education and health service development in the country which are beginning to have an definitive eroding affect on the focus and orientation of health service development and the nature and goals of medical education in the country. These include among others:

- the growth of 'capitation fee' colleges;

- the mushrooming of institutions based on 'caste' and communal affiliations;

- the increasing commercialization of health care;

- the mushrooming of private high tech diagnostic centres and the inevitable glorification of high tech tertiary care at the cost of primary health care priorities;

- the increased 'doctor-drug producer axis' with 'vested interest' in the 'abundance of ill health' and the enhanced growth of a powerful medical industrial complex.

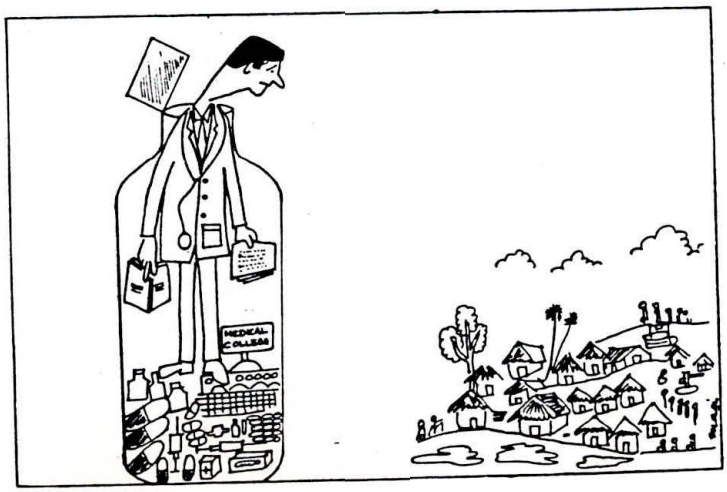
- the increasing erosion of norms of medical ethics and increase in medical malpractice;

- the unresolved and increasing problem of private practice among full time medical college teachers.

This crisis between stated goals and policy formulations versus actual realities, is the theme of this report . This report is being presented in four sections.

DIAGNOSIS OF THE PROBLEM

A brief situation analysis of all aspects of Medical Education in India identifying salient features; matters of concern and recommendations and prescriptions of expert committees and others; and identifying critical issues that have not been given adequate consideration.



APPROACHES TO TREATMENT

A brief overview of Indian experience towards community orientation and social relevance. This section outlines the salient features of many innovations and experiments in medical colleges; and describes the diverse contributions to the process of seeking an alternative framework for experimentation and change.

EMERGING TRENDS

This section summarises the social context for change and the emerging helath scenario which was forecast by a Policy Delphi exercise recently and forms the background against which future changes in the medical education sector, will have to be located.

PRESCRIPTION FOR CHANGE

Finally, keeping in mind the mandate of the Independent Commission, some critical issues are highlighted and a twelve point programme is suggested as a PRESCRIPTION FOR CHANGE.

"The aim of medical education is to produce doctors who will promote the health of all people, and that aim is not being realised in many places, despite the enormous progress that has made during this century in the biomedical sciences. The individual patient should be able to expect a doctor trained as an attentive listener, a careful observer, a sensitive communicator and an effective clinician; but it is no longer enough only to treat some of the sick. Thousands suffer and die every day from diseases which are preventable, curable or self-inflicted, and millions have no ready access to health care of any kind.....

Scientific research continues to bring rich rewards; but man needs more than science alone, and it is the health needs of the human race as a whole, and of the whole person, that medical educators must affirm"

The Edinburgh Declaration
The World Conference on Medical Education 1988

2. DIAGNOSIS OF THE PROBLEM

An overview of the growth and development of Medical Education in the country, since Independence is a necessary pre-requisite to understand the dynamics of change and the complexities of the emerging problems.

2.1. SITUATION ANALYSIS

The country has witnessed a tremendous growth in the infrastructure and facilities for Medical Education since Independence. A perusal of tables 1 and 5 will highlight the following salient features:

a) There has been a massive, quantitative expansion in Medical college facilities in the country - from 22 colleges in 1947 admitting 1983 students to 145 colleges admitting approximately 16,200 students annually in 1993. This represents a 600% expansion in colleges and 800% expansion in admissions.

b) The Male-female ratios in admission and output have increased gradually from 78:22 in 1971 to 60:40 in 1990, with an unusual peak of over 41% admissions of female in 1977-78 and a corresponding peak of female doctors graduates in 1982-83 (44%). The overall trend has been positive and more female doctors needed by the country are being catered for.

c) The increase was gradual till 1975. Then following the Srivastava Report there was a plateau till 1985 and then another phase of expansion, till the Presidential ordinance in 1993.

The phase till 1974 was predominantly an increase in government sponsored colleges, and the phase after 1988 was predominantly the commercialization and private sector phase of medical college expansion.

d) Till 1985, we were fairly consistent about the number of colleges in the country - without much variance between government and non-government sources. Since 1985, even the publically stated estimates have varied from 130 to 170. The most recent estimate of the new Health Minister is 200(!).

2.2. REGIONAL DISTRIBUTION AND DISPARITY: (The BIMAROU dilemma!)

Based on the Mudaliar Committee norm of one college per 50 lakh (5 million) population, a review of the present regional distribution of colleges in the country taken against the 1991 census estimates show important trends (see tables 2, 4 and 6).

a) Some states like Karnataka, Maharashtra, Tamilnadu and Union Territory of Delhi show a number far beyond their entitlement and requirement.

TABLE 1

GROWTH OF MEDICAL COLLEGES AND ADMISSIONS SINCE INDEPENDENCE (1947-93)

YEAR	NO. OF MEDICAL COLLEGES	ADMISSIONS	OUTPUT
1947	22	1,983	959
1948	30	2,811	N.A.
1949	30	2,609	N.A.
1950	30	2,675	N.A.
1951	31	2,489	N.A.
1952	31	2,691	N.A.
1953	31	2,846	N.A.
1954	31	3,087	N.A.
1955	31	3,660	N.A.
1956	52	3,958	N.A.
1957	52	4,083	N.A.
1958	52	4,554	N.A.
1959	52	4,904	N.A.
1960	52	5,874	N.A.
1961	79	6,846	N.A.
1962	79	7,719	N.A.
1963	79	9,697	N.A.
1964	79	9,897	N.A.
1965	79	10,520	N.A.
1966	87	10,620	N.A.
1971	95	12,029	N.A.
1972	98	12,048	10825
1973	100	11,772	11311
1974	105	13,205	11364
1975	105	11,561	11911
1976	106	11,281	11982
1977	106	11,176	11962
1978	106	11,117	13783
1979	106	10,658	12190
1980	106	11,021	13429
1981	106	11,101	12170
1982	106	10,749	12197
1983	106	11,054	15992
1984	106	10,877	10511
1985	106	10,610	10469
1986	122	10,090	11470
1987	125	11,622	12280
1988	128	14,166	12100
1989	128	13,262	12292
1990	128	11,791	N.A.
1993	145	16,200	N.A.

* N.A. - NOT AVAILABLE

SOURCES : 1, 4, 9

TABLE 2

REGIONAL DISTRIBUTION AND STATUS AGAINST ENTITLEMENT - 1993

SL. NO.	STATES	POPULATION 1991 CENSUS (MILLIONS)	ENTITLE-MENT * *	ACTUAL COLLEGES 1993	NO. OF SEATS	COMMENTS / OBSERVATIONS
1	ANDHRA PRADESH	66.50	13	10	1120	ADEQUATE
2	ASSAM	22.40	4	3	365	ADEQUATE
3	BIHAR *	86.40	17	9	580	SHORTFALL
4	GUJARAT	41.30	8	6	885	ADEQUATE
5	HARYANA	16.50	3	2	150	ADEQUATE
6	HIMACHAL PRADESH	5.20	1	1	65	ADEQUATE
7	JAMMU & KASHMIR	7.70	2	3	260	ADEQUATE
8	KARNATAKA	45.00	9	19	3266	MASSIVE EXPANSION CAPITATION / COMMER -CIALIZATION TREND
9	KERALA	29.10	6	5	700	ADEQUATE
10	MADHYA PRADESH	66.20	13	6	720	SHORTFALL
11	MAHARASHTRA* & GOA	80.10	16	30	3004	MASSIVE EXPANSION CAPITATION / COMMER -CIALIZATION TREND
12	ORISSA	31.70	6	3	321	SHORTFALL
13	PUNJAB	20.30	4	6	520	ADEQUATE
14	RAJASTHAN	44.00	9	6	610	ADEQUATE
15	TAMILNADU * & PONDICHERY	56.70	11	15	1590	MODERATE EXPANSION COMMERCIALIZATION TREND INITIATED
16	UTTAR PRADESH	139.10	28	9	1071	SHORTFALL
17	WEST BENGAL	68.10	14	7	755	SHORTFALL
18	DELHI	9.40	2	4	460	EXCESS
19	NORTH EAST EXCLUDING ASSAM	9.10	2	1	85	ADEQUATE
20	OTHER STATES / UNION TERRITORIES	1.60	0	0	0	- - -
	TOTAL	846.40	168	145	16527	

SOURCES : 6, 10, 11

* INFORMATION ON ONE COLLEGE IN THESE THREE STATES ARE NOT AVAILABLE.

**: NORM: 1 MDICAL COLLEGE / 5 MILLION PEOPLE

TABLE 3

PATTERN OF GROWTH - NO. OF MEDICAL COLLEGES BY REGIONS AND STATES - 1965 AND 1995

ZONE / STATE	NO. OF MEDICAL COLLEGES IAMR - 1965	NO. OF MEDICAL COLLEGES - DIRECTORY OF MEDICAL COLLEGES IN INDIA - 1995
CENTRAL ZONE		
MADHYA PRADESH	7	6
UTTAR PRADESH	6	9
EASTERN ZONE		
ASSAM	3	3
BIHAR	4	9
MANIPUR		1
ORISSA	3	3
WEST BENGAL	5	7
SOUTHERN ZONE		
ANDHRA PRADESH	8	10
KARNATAKA	9	19
KERALA	4	5
TAMILNADU & PONDICHERRY	9	15
WESTERN ZONE		
GUJARAT	5	6
MAHARASHTRA & GOA	11	30
NOTHERN ZONE		
JAMMU & KASHMIR	1	3
HARYANA		2
HIMACHAL PRADESH		1
PUNJAB	5	6
RAJASTHAN	5	6
DELHI	3	4
	88	145

SOURCES : 1, 6, 9

* IAMR - INSTITUTE OF APPLIED MANPOWER RESEARCH

TABLE 4

REGIONAL PATTERN OF GROWTH OF MEDICAL COLLEGES IN DECADES

STATES / UNION TERRITORIES	PRE 1950	1950-59	1960-69	1970-79	1980-89	1990-94
ANDHRA PRADESH	3	4	1		2	
ASSAM	1		2			
BIHAR	2		3	4		
GUJARAT	2	1	2		1	
GOA			1			
HARYANA			1			
HIMACHAL PRADESH			1			
JAMMU & KASHMIR		1		1	1	
KARNATAKA	1	3	5	1	8	
KERALA		2	2		1	
MADHYA PRADESH	2	2	2			
MAHARASHTRA	4	1	4	2	10	8
MANIPUR				1		
ORISSA	1	1	1			
PUNJAB	1	2	1	1		1
RAJASTHAN		1	3	1		1
TAMIL NADU	3	1	5		4	1
UTTAR PRADESH	2		5	1		1
WEST BENGAL	4	1	2			
DELHI	1	2		1		
PONDICHERRY		1				
TOTAL	27	23	41	13	27	12
CUMULATIVE TOTAL	27	50	91	104	131	143 *

* YEAR ESTABLISHED - NOT GIVEN FOR 2 COLLEGES

Source 6,10

TABLE 5

MALE AND FEMALE ADMISSION TRENDS

YEAR	NO. OF MEDICAL COLLEGES	ADMISSIONS		TOTAL	QUALIFIED		TOTAL
		MALE%	FEMALE%		MALE%	FEMALE%	
1971-72	98	78	21.5	12048	73	26.9	10825
1972-73	100	77.6	22	11772	74.6	25	11311
1973-74	105	79	20.7	13205	76.5	23	11364
1974-75	105	78	21.8	11561	76	23.8	11911
1975-76	106	77.9	22	11213	77	22.5	11982
1976-77	106	75.5	24	11176	77	22.5	11962
1977-78	106	58	41.8	11117	78	21.8	13783
1978-79	106	72.6	27	10658	79	20.7	12190
1979-80	107	70	29.7	11021	79	20.8	13429
1980-81	109	69	30.8	11101	77	22.7	12170
1981-82	111	67.8	32	10749	74.5	25	12197
1982-83	111	63	36.8	10784	55.9	44	15992
1983-84	111	N.R.	N.R.	10877	71.6	28	10511
1984-85	116	63.6	36	10610	70.7	29	10469
1985-86	122	62.6	37.3	10090	67.3	32.6	11470
1986-87	125	61.5	38	11622	65.6	34	12280
1987-88	128	61	38.9	14166	63.7	36	12100
1988-89	128	60	39.8	13262	62.9	37	12292
1989-90	128	60	39.8	11791	N.R.	N.R.	N.R.

* N.R. = NOT RECEIVED

SOURCES : 4, 9

TABLE 6

DISTRIBUTION OF MEDICAL COLLEGES BY SEATS
SIZE OF COLLEGES (BY SEATS) - 1993

NO. OF SEATS	NO. OF COLLEGES	TOTAL	CUMULATIVE TOTAL
35	1	35	35
50	18	900	935
60	5	300	1235
64	1	64	1299
65	2	130	1429
70	2	140	1569
75	2	150	1719
80	1	80	1799
85	1	85	1884
90	2	180	2064
100	41	4100	6164
102	1	102	6266
107	3	321	6587
110	4	440	7027
113	1	113	7140
115	1	115	7255
118	1	118	7373
120	6	720	8093
125	3	375	8468
130	6	780	9248
140	4	560	9808
150	11	1650	11458
155	1	155	11613
170	1	170	11783
175	5	875	12658
180	3	540	13198
185	2	370	13568
195	2	390	13958
191	1	191	14149
200	5	1000	15149
210	1	210	15359
240	1	240	15599
300	2	600	16199
328	1	328	16527

TOTAL 142

* THREE COLLEGES - SEAT TOTALS NOT AVAILABLE

SOURCE : 10

TABLE 7

DISTRIBUTION OF COLLEGES BY SEATS (REGIONAL PATTERN)

STATES / UNION TERRITORIES	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	250	300	TOTAL
ANDHRA PRADESH						6		1	(125) - 2		1								1120
ASSAM			(65) - 1						1				1						365
BIHAR (-1) *	4				2	2													580
GUJARAT						2		1						(175) - 2			(210) - 1		885
GOA			1																70
HARYANA	(35) 1							(115) - 1											150
HIMACHAL PRADESH			(65) - 1																65
JAMMU & KASHMIR		1				2													260
KARNATAKA		1				1		(118) - 1	3		2			(175) - 1	(185) - 1	1		(328) - 1	3266
KERALA						3										2			700
MADHYA PRADESH		1				1				4									720
MAHARASHTRA (-1) *	4	1	(64) - 1			16		2	1							2	(240) - 1		2934
MANIPUR					(85) - 1														85
ORISSA							(107) - 3												321
PUNJAB	3		1								2								520
RAJASTHAN	1					3	1				1								610
TAMIL NADU (-1) *	1	1		(75) - 1		2	3		(125) - 2		1			(175) - 3					1515
UTTAR PRADESH	1			1		2	(102) - 1	(113) - 1			1				(185) - 1	(191) - 1			1071
WEST BENGAL	3										3	(155) - 1							755
DELHI	1					1			1					1					460
PONDICHERRY				(75) - 1															75
	(50) - 18	5	(70) - 2	(80) - 1	(90) - 2	41	(110) - 4	(120) - 6	(130) - 6	4	11	(155) - 1	1	(180) - 3	(195) - 2	(200) - 5	(210) - 1	(300) - 2	16527
	(35) - 1		(65) - 2	(75) - 2	(85) - 1		(107) - 3	(115) - 1	(125) - 2					(175) - 5	(185) - 2	(191) - 1	(240) - 1	(328) - 1	
			(65) - 1				(102) - 1	(118) - 1											
								(113) - 1											
TOTAL (-3)	19	5	5	3	3	41	8	9	9	4	11	1	1	8	4	6	2	3	

* INFORMATION OF TOTAL SEATS OF THREE COLLEGES IN EACH OF THESE STATES ARE NOT AVAILABLE

Especially in the first two states mentioned, this trend is further underlined by the association with the privatization / commercialization trend as well.

b) Some states like Bihar, Madhya Pradesh, Uttar Pradesh, have colleges far below their entitlement (nearly 50% less). Orissa, Gujarat, Rajasthan and West Bengal also have comparitively less than their entitlement.

c) At a National level, the overall situation evens out with only a small shortfall. However the same regional planning distortions, seen in all aspects of Health Care planning in the country are seen.

d) The Regional disparity are characterized by another feature. Karnataka and Maharashtra, the commercial belt, also have the largest admission ratios thereby proving the economy of scale theory - more admission more income and profits!

2.3. COMMERCIALIZATION - BEYOND PRIVATIZATION

In terms of ownership and governance there has been a gradual increase in the number of colleges run under the auspices of the Private Sector (Trusts or Societies) from less than 5% at the time of Independence to 30% in 1993-94 (see table 2).

While 'private sector' support to higher education may not be a negative trend per se, it is significant that most of the more recent entrants into the private sector group of medical colleges show the following characteristics:

- They belong to the 'capitation fee' charging variety of medical colleges and the magnitude of this fees has been increasing over the years; (from 1 lakh to 30-35 lakhs per seat !)

- They are initiated by trusts and societies often with caste / communal affiliations;

- They are initiated by individuals representing specific sectoral interests like sugar barons in Maharashtra State, or liquor barons and other pressure groups in Karnataka and Andhra Pradesh, all of whom are not conversant with the objectives of medical education;

It is quite significant that all the unrecognised medical colleges in the country (26 out of 146 estimated by the Ministry of Health and Family Welfare, Annual Report 1993-94) are in this group.

These represent a trend of Commercialization of Medical Education which is significantly different from the issue of privatization of higher education.

Further, reports in the media are regularly available of how colleges run on the capitation fees ethos are also contributing to fall in qualitative standards at the time of examinations, where money, power and political influence affect results.

The 'nexus' between the capitation fees colleges lobby and the political system through contribution to party funding is also a subject of media report and debate.

2.4. PROBLEMS OF NORMS AND ESTIMATES : SHORTFALL OR EXCESS?

The growth of medical colleges in the country has resulted from a application of the Mudaliar Committee norm of 1 Doctor per 3000-3500 population and the norm of 1 medical college per 5 million population. With a growing population, these norms have kept up the momentum of expansion.

However, we would like to emphasise that in our considered opinion the situation in the country with its present stock of 300,000+ doctors is one of having Too many doctors, not less. Some important facts that underscore this opinion are:

a) The Bhore and Mudaliar Committees used only 'MBBS Graduates' as being doctors in all their calculations and estimates.

In the Indian situation we have trained practitioners of a range of alternative systems. At the primary care level all these can be considered to be contributing to the health care delivery system.

When their numbers - estimated from Government reports are included in deriving doctor - population ratios then the situation changes remarkably to an excess rather than the deficiency situation, usually portrayed (see table 11).

b) It is now well documented that majority of the doctors who graduate from the **145** medical colleges (presently established in India) are not motivated to public health / primary health care and opt for specialization and / or urban practice. The doctor-population estimates are further skewed by this factor - so we have an increasing number of the wrong type of doctors in the wrong situation. Rural, tribal and hilly areas are underserved while urban areas have an excess. Doctor population ratios also show wide regional disparities.

c) Finally the estimates of 'brain-drain' both external (from India to the developed world) and internal (from the public sector to the profit oriented private urban sector) is variable but on the whole have been showing an increasing trend. It has been now well established that the tax-payer supported governmental medical education sector benefits the private sector in the country and the health service sector of the established market economies of the western world, more than the health services of the government.

While factor (a) explodes the myth of the shortage, (b) and (c) underscore that any increase in the existing type of MBBS doctors is unlikely to make any impact on the problem.

It is not at all surprising that as early as 1980, the ICSSR / ICMR Health for all Study Group(15) categorically stated that "Two immediate decisions will have to be taken.

i) There should be no new medical colleges and no increase in the intake of existing medical colleges.

ii) There is no need at all to set up new and additional institutions to train additional doctors through short term courses".

2.5) STUDENT WASTAGE AND BRAIN DRAIN

Successful human power development policies presuppose that efforts or resources paid for by the tax payer in training should bear returns of fully qualified personnel, reaching the required positions, to confidently and efficiently provide service to the community.

Wastage occurs if students discontinue or delay their studies or trained personnel seek avenues of work other than support to the public services eg: through brain drain to developed or other countries and so on.

Studies on 'Wastage' and 'Brain drain' have been rather inadequately pursued in the country. These are particularly important because there is both a urgent need for trained manpower, especially in situations of disadvantage as well as a shortage of resources, to facilitate their training.

The Institute of Applied Manpower Research in collaboration with National Institute of Health Administration and Education conducted the only known study on wastage. However, the data was from 7 colleges only, out of the potential 36 in the sample and the period of study 1954-56. Real wastage (not completing the course) was 6% and time wastage (delays in completing the course) was 9-12%. Compared to studies done in India and elsewhere these were not very alarming. However, these were not followed up.

Another area which has not received adequate attention is the attrition rate among women doctors due to family demands and child bearing. This is particularly important since there has been an attempt to increase the number of females at the intake stage, which is welcome (see table 5) .
However large attrition during the course or after graduation would make this shift counterproductive. This area of study should also help identify ways and means of support to female doctors to prevent attrition due to family demands and facilitation of reentry into the profession, with continuing education and other supports at a later stage as well.
In terms of 'Brain Drain', studies have been done to estimate the magnitude of

TABLE 10

DOCTORS REGISTERED WITH STATE MEDICAL COUNCILS (1984-1990)

NAME OF STATE MEDICAL COUNCIL	1984	1985	1986	1987	1988	1989	1990
ANDHRA PRADESH	15373	15990	16516	17108	17639	18236	18898
ASSAM	8279	8640	8912	9145	9428	9746	10099
GUJARAT	16955	17669	18417	19173	19806	20701	21576
BIHAR	21621	22217	22902	23450	24137	24872	25689
JAMMU & KASHMIR	3103	3289	3442	3622	3676	3937	4087
KARNATAKA	23470	24490	25518	26722	39355	40872	42399
BHOPAL (M.P.)	6473	7141	7867	8526	9147	9852	10542
MAHARASHTRA	35585	37394	39397	41035	42730	44684	46858
ORISSA	8831	9378	9478	9866	10081	10426	10746
PUNJAB	23096	23632	24128	24615	25130	25598	26178
RAJASTHAN	10065	10501	11059	11613	12243	12912	13475
TAMILNADU	35644	36860	38673	40023	41465	43074	44769
UTTAR PRADESH	26613	27584	28514	29376	30348	31336	32369
WEST BENGAL	35986	37005	37751	38738	39510	40210	40920
TRAVANCORE (KERALA)	13644	14208	14900	15568	16455	N.A. *	N.A.
HYDERABAD (A.P.)	11091	11504	11780	12153	12469	12805	13199
HARYANA	N.A.	N.A.	256	319	437	523	N.A.
MCI	N.A.	N.A.	794	830	1639	2412	3196
TOTAL	295829	307502	320304	331882	355695	352196	365000

* N.A. = NOT AVAILABLE

SOURCE : 5, 10

TABLE 11

DOCTOR POPULATION RATIOS - ALLOPATHIC SYSTEM AND INCLUDING PRACTITIONERS OF ALTERNATIVE SYSTEM OF MEDICINE

YEARS	ALLO-PATHS (1)	HOMEO-PATHS (2)	AYUR-VEDA (3)	SIDHA (4)	UNANI (5)	TOTAL (6)	POPULATION (MILLIONS) (7)	DOCTOR POPULATION 1:7	DOCTOR POPULATION 6:7
1974	190838	145434	223109	18128	30400	607909	590	1:3091	1:970
1979	249752	112638	225477	18093	25988	631948	660	1:2642	1:1044
1981	268712	115710	233824	18357	28737	665340	683	1:2541	1:1026
1984	297228	123852	251071	11352	28382	711885	735	1:2472	1:1032
1985	306966	123852	251071	11352	28382	721623	750	1:2443	1:1039
1986	319254	131091	272800	11581	28711	763437	767	1:2402	1:1004
1987	331886	N.A.	N.A.	N.A.	N.A.	N.A.	783	1:2359	N.A.
1988	355695	N.A.	N.A.	N.A.	N.A.	N.A.	800	1:2249	N.A.
1989	352196	N.A.	N.A.	N.A.	N.A.	N.A.	817	1:2319	N.A.
1990	365000	N.A.	N.A.	N.A.	N.A.	N.A.	834	1:2284	N.A.
1991	394068	N.A.	N.A.	N.A.	N.A.	N.A.	851	1:2159	N.A.

SOURCE : 7, 10

TABLE 12

NO. OF COLLEGES AND ADMISSIONS OF ALTERNATIVE SYSTEMS OF MEDICINES (1991)

STATES / UNION TERRITORIES	AYURVEDA / SIDDHA NO. OF COLLEGES	AYURVEDA / SIDDHA ADMISSION CAPACITY	UNANI NO. OF COLLEGES	UNANI ADMISSION CAPACITY	HOMEOPATHY NO. OF COLLEGES	HOMEOPATHY ADMISSION CAPACITY	TOTAL NO. OF COLLEGES	TOTAL NO. OF ADMISSION
ANDHRA PRADESH	3	110	2	80	3	125	8	315
ASSAM	1	25			5	200	6	225
BIHAR	11 (3)*	180	1	40	26	2135 (16)	38	2355
GUJARAT	9	258			3	190	12	448
HARYANA	4	200					4	200
HIMACHAL PRADESH	1	50					1	50
JAMMU & KASHMIR	1	0					1	0
KARNATAKA	8	195	1	15	6	435	15	645
KERALA	5	170			4	250	9	420
MADHYA PRADESH	7	187	1	25	13	490	21	702
MAHARASHTRA	17	795	1	50	24	1221	42	2066
ORISSA	2	60			3	140	5	200
PUNJAB	3	130			3	140	6	270
RAJASTHAN	3	180	3	80(2)	3	140	9	400
TAMIL NADU	2+1 **	115	1	15	1	21	5	151
UTTAL PRADESH	9	410	4	180	16	670	29	1260
WEST BENGAL	4	120 (2)			10	1236	14	1356
DELHI	4	150	2	50	1	60	7	260
TOTAL	94+1	3335	16	535	120	7453	232	11323

SOURCE : 2

* FIGURES IN () BRACKETS INDICATE REPORTING UNITS

** SIDDHA - 1

migration and to enumerate 'push' and 'pull' factors. But here again no serious attempts have been made to identify the economic losses due to the drain. In more recent years, with the focus on NRI investments in the development process, the drain of doctors to lucrative practice overseas is often seen as a 'gain' rather than a 'drain', further complicating the issue.

A study of Doctors migrating has shown a steady increase from an annual average of 810 during the I plan phase to 5304 in 1986-87 (which represents nearly 30% of annual output) which is remarkably high.

This is therefore an area of importance for continuous monitoring and study, because of the broader economic - political - social - cultural context of this phenomena. For instance, the recent phenomena of NRIs from the US promoting High technology Diagnostic Centres in the country can be seen as the MNCs in USA opening new market avenues for high tech gadget, whose sale in the US has shown a slump in recent years. Thus while the NRI process in Health care is often portrayed in the media and policy formulations as an 'altrustic process' in reality it is a 'market economy process'. In addition there is a cultural aspect as well - that of the promotion of Western Health Care as being of higher standard than Indian health care, not withstanding the serious cultural and economic crisis being faced by the Western Health Care itself !

Much of the so called Continuing Education efforts that has become common in more recent years, especially linked to NRI supported hospitals and diagnostic centres is primarily focussed on stimulating the local medical profession to catch up with the technological gadgetry of the west. The support of the growing Medical - Industrial complex to this Continuing Education efforts is therefore not at all surprising.

"The training of health services personnel should be fully oriented to the people - their social, cultural and economic conditions and their health profile"

- ICSSR-ICMR Health for All Report, 1981

2. 6) QUALITATIVE DECLINE IN STANDARDS

Medical Council of India has from time to time laid down a) guidelines for minimum standards for medical colleges; b) guidelines for the framework and content of medical curriculum; and c) guidelines for the minimum qualifications and experiences of teachers for medical colleges.

These norms and guidelines for standard 100 seat medical colleges are upgraded from time to time. They are applied at the time of comprehensive inspection and recognition of new colleges and through the concurrent monitoring system of a schedule, sent in by the colleges once every 5 years to maintain the registration system. Repeat inspections are also carried out.

Senior faculty in the Medical profession are used as certified MCI inspectors to visit institutions and maintain standards.

While in principle, the MCI guidelines were meant to maintain standards during the post-independence phase of expansion, in practice they were not able to establish a consistent and high standard of education in the country leading to, what is now 'universally accepted' as a major decline in standards.

Key factors contributing to this decline inspite of the presence of a National Body like MCI are:

i) The sector of Education in the Constitutional Schedule is part of the concurrent list. While Central Government and national bodies can recommend norms and standards, it is State Governments and State Universities that are finally responsible for the actual developments. As seen in the 'mushrooming of capitation fees colleges' issue, state governments and universities have accorded recognition to local colleges inspite of MCI norms even on the capitation fees issues.

ii) MCI inspectors have not been able to maintain the high standards of enforcement required by them. As in all aspects of life in the country, corruption and the extraneous influences of money power or political interference have managed to circumvent the inspection mechanism.

iii) In the context of the Norms available at present, MCI inspectors tend to concentrate primarily on infrastructure and staff position rather than quality / methodology / orientation of medical education. Hence even in colleges which have been certified as being recognition worthy on the basis of infrastructure and faculty norms, the quality of medical education has been declining.
The decline in standards, that have been seen in more recent years, have been quite remarkable and it would not be 'rash' to state that if an objective evaluation were to be made of the 135 odd medical colleges presently recognised by the MCI, using its own minimum requirements norms, then atleast 50% of the colleges would have to be derecognised immediately.

2.7. ADMISSION REQUIREMENTS AND SELECTION PROCEDURES

An overview of available information on 145 recognised / unrecognised medical colleges in India (1994) shows that the Admission requirements and selection procedures show an overall uniformity with some regional variation. These are as follows:

ADMISSION REQUIREMENTS

An age restriction of 17 years is universal. In addition PUC as qualifying examination with certain minimum levels of marks in the Science subjects have been laid down by MCI and generally accepted. Domicle restrictions vary from state to state, though most cater to students primarily from their own states.

Reservations are available for varying socially disadvantaged categories but the extent of reservation varies. These include SC, ST, OBC, children of defence personnel, Government of India nominees, religious groups, especially in institutions run by religious minorities, rural candidates. Less commonly - reservations are available in a few institutions for disabled, special areas like border areas, tribal areas and a host of other subgroups (see table 9A - 9C of supplement).

MCI has recommended Medical exam for fitness in 1971. In 1977 it included NCC, sports and athletics, and minimum 10% reservation for candidates from other states in the context of National integration efforts. These have been accepted by some institutions only.

SELECTION PROCEDURES

The PUC qualifying exam marks are an important factor for selection in 30% of the colleges. Many colleges now accept the Central and State Government run centralised examinations for medical / dental seats (50%).

A few colleges have their own entrance examinations and a selection interview. Only two have other methods at the time of selection including aptitude / value testing, group dynamics and leadership skills and other skills assessed by various observation tests (SJMC - Bangalore, CMC, Vellore). Table 8 provides an overview of the different selection procedures and the percentages of colleges that include them in the selection process at present.

TABLE 8

METHOD OF SELECTION

METHOD OF SELECTION IN MEDICAL COLLEGES		NO. OF MEDICAL COLLEGES	PERCEN- - TAGE	TOTAL PERCEN- - TAGE
1) QUALIFYING EXAM (PUC / BSc.)				
a) Merit in the Qualifying Exam and Interview		35	24.14	
b) Marks obtained in the Science Subjects		8	5.52	
	TOTAL	43		29.66
2) COMMON ENTRANCE TEST				
a) Written		20	13.79	
b) Objective Type		20	13.79	
c) Both		10	6.90	
d) Medical and Dental Admission test and objective type		8	5.52	
e) Common Pre-Medical test and Interview		16	11.03	
	TOTAL	74		51.03
3) MULTI STAGE SELECTION PATTERN				
Own entrance test, AND Interview, Group Observation, Psychological test as well as values test		2	1.38	
4) CAPITATION FEES *		23	15.86	
5) NOT AVAILABLE		3	2.07	
GRAND TOTAL		145		100

* FOR MANAGEMENT QUOTAS

SOURCE : 6, 10

TABLE 9A

RESERVATION IN MEDICAL SEATS - A

STATES / UNION TERRITORIES	SC %	ST%	BC%	WOMEN%	GOVT. OF INDIA NOMINEE	GENERAL
ANDHRA PRADESH	15	6	25	30	1% (12 SEATS)	
ASSAM	7	15	6 SEATS		5% (20 SEATS)	45% (164 SEATS)
BIHAR	14	10	23	3	SOME %	15% (ALL INDIA)
GUJARAT	7	13	10		1% (10 SEATS)	15% (ALL INDIA)
GOA	15		4		SOME %	15% (ALL INDIA) 54% (GENERAL)
HARYANA		BOTH 33.6	22	3 SEATS	TRIPURA-3 SEATS	30 (ALL INDIA)
HIMACHAL PRADESH	13.8	736	3		7.6	15 (ALL INDIA) 43 (CENTRAL)
JAMMU & KASHMIR	8		21			
KARNATAKA	SOME %	SOME %	SOME %	SOME %	SOME %	
KERALA	8	2	25		SOME %	15 (ALL INDIA) 65 (KERALA STATE M
MADHYA PRADESH		BOTH 15		15	4	15 (ALL INDIA)
MAHARASHTRA		BOTH 10 SEATS	40		SOME %	SOME %
MANIPUR						35%
ORISSA	8	12			SOME %	15 (ALL INDIA)
PUNJAB		BOTH 25	2		STATE GOVT. NOMINEE - SOME%	15 (ALL INDIA)
RAJASTHAN	8	6			28	15 (ALL INDIA)
TAMIL NADU	18	1	50		SOME %	31%
UTTAR PRADESH	10	2	15		SOME %	50 (30 WOMEN)
WEST BENGAL	SOME %	SOME %			SOME %	15 (ALL INDIA) % (STATE GOVT.)
DELHI	15	7.5			12 (OTHER STATES) *	15 (ALL INDIA)
PONDICHERRY	7	5			24	38% 14% (ALL INDIA)

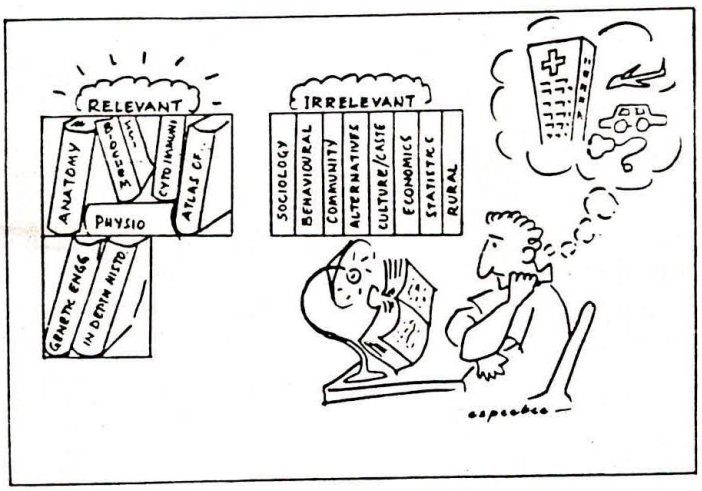
* FROM ARUNACHAL PRADESH, ANDAMAN & NICOBAR ISLANDS, DADAR & NAGAR HAVELI
LADAK, MANIPUR, MEGHALAYA, MIZORAM, NAGALAND, SIKKIM AND TRIPURA

TABLE 9B

RESERVATION IN MEDICAL SEATS - 9B

	SPECIAL CATEGORIES	STATES	TOTAL
1)	CHILDREN OF SERVICE/ EXSERVICE MEN	ANDHRA PRADESH, GUJARAT, GOA, HARYANA, HIMACHAL PRADESH, KARNATAKA MADHYA PRADESH, ORISSA, PUNJAB RAJASTHAN	10
2)	CHILDREN OF FREEDOM FIGHTERS	ASSAM, GOA, HARYANA, HIMACHAL PRADESH JAMMU & KASHMIR, MADHYA PRADESH, UTTAR PRADESH AND DELHI	8
3)	CHILDREN OF DECEASED/ DISABLED DEFENCE OFFICERS	HARYANA, GOA, KERALA, PUNJAB, UTTAR PRADESH, AND DELHI	6
4)	PHYSICALLY HANDICAPPED	KARNATAKA, GOA, ANDHRA PRADESH MAHARASHTRA, ORISSA, RAJASTHAN, UTTAR PRADESH	7
5)	NCC, SPORTS PERSONS	KARNATAKA, JAMMU & KASHMIR, ANDHRA PRADESH	3
6)	CENTRAL / STATE GOVERNMENT DEFENCE EMPLOYEES	GOA, ASSAM, JAMMU & KASHMIR, MAHARASHTRA	4

SOURCE : 10



RESERVATION IN MEDICAL SEATS - 9C

	OTHER CATEGORIES	STATES
1)	Other States - Meghalaya, Mizoram, Tripura Nagaland, Arunachal Pradesh	Assam, Manipur, Delhi
2)	Tea Garden Labour, Immigrant Muslims. Children of Employees of Central Govt.	Assam
3)	Self financing Nepalese students, TISCO Sri Lakshmi Narayan Trust, Coal Mines Welfare Organisation	Bihar
4)	Donors Nominee, Armed Forces Personnel	Gujarat
5)	Gujjar, Backward, other Social Castes District LCH, District Kargil, Areas near actual line of control, children of permanent resident Defence Personnel	Jammu & Kashmir
6)	Children of Political Sufferers	Karnataka & Punjab
7)	Horanadu, Gadinadu Kannadigas, Anglo Indians, Parsi Community, Diploma Holders	Karnataka
8)	Nominees, OPH Candidates, Degree / Diploma holders in Ayurveda and Homeopathy, Kerala origin settled in Andaman & Nicobar Islands and Lakshadweep, Nominees of Drugs control Dept. and D.Pharma holders, Departmental Candidates (B.Sc.)	Kerala
9)	NRIs, Maharashtra - Karnataka disputed area border residents, Nominees of Miraj Medical Centre and Nominees of donors at R.A. Podar Medical (Ayurvedic College) Bombay	Maharashtra
10)	Green Card Holders	Orissa
11)	Border area, Wards of gallantry awardees, Children / Widows of Punjab Police, PAP, Punjab Home Guard Personnel (killed / disabled), November 1984 riot affected displaced persons, terrorists affected, wards of Medical staff of Guru Gobind Singh Medical College	Punjab

SOURCE : 10

CAPITATION FEES AS A SELECTION PROCEDURE

Among the more recently opened colleges, donations and capitation fees is a major factor of selection representing the commercialization of the medical education sector (16%). The capitation fees range from 10 to 35 lakhs and NRI's pay upto 100,000 US $ (media reports).

Inspite of official stands, mostly 'lip service' against capitation fees by the government - (both at central and state level) and professional councils and bodies at all levels, the capitation fees lobby group of medical colleges has been gaining greater and greater patronage by the active connivance of both professional and political leadership.

In state like Karnataka - even the cabinet meet to decide on the permissible levels of capitation fees which are then applied and not surprisingly, exceeded by irregular and unofficial means.

The Supreme Court Judgement in a special writ petition from Andhra has established that capitation fees as it is practiced today "violates the right to education under the constitution;

..... is wholly arbitrary;

..... is unconstitutional according to article 14 - equality before law .....;

is evil, unreasonable, unfair and unfit.....;

and enables the rich to take admissions whereas the poor have to withdraw due to financial inability .....;
and therefore is not permissible in any form ....."
In spite of this, the crisis continues and the growth of such colleges continues unchecked.

> The nexus between the capitation fees lobby and the Medical Education policy makers and leadership at state / central levels is therefore an important area that needs urgent study if the commercialization of medical education has to be halted.

2.8) TEACHING FACULTY

The development and training of faculty for Medical Colleges has been a greatly neglected area inspite of all the rhetoric about 'standards' and inspite of guidelines drawn up for their numbers, qualifications and selections.

a) Vacancies

While data on current availability and the actual shortfalls are not easily available at state or central level, there is increasing concern that this is becoming a major problem. In states like Karanataka, with the unchecked proliferation of private capitation fees colleges the depletion or shift of faculty from Government colleges to private colleges in the lure of better pecuniary benefits has become a serious problem. In the near future, this could lead to a situation of potential derecognition, of the government colleges themselves.

b) **Private Practice**

While MCI and state / central government and most professional bodies have endorsed in the past the need for teachers of medical colleges to be full-time non-practicing, this situation is changing rapidly with clandestine or officially sanctioned private practice, becoming common place.

The logic of the rule was to ensure that medical teachers were available for improving and sustaining the quality of care in teaching hospitals; available for formal and informal training of junior doctors, interns and students; and involved in research to maintain standards and keep abreast of growing professional knowledge.

The situation is rather different now, by both default and design, affecting quality of care in teaching hospitals and quality of teaching and research as well. In addition it has contributed to the entry of 'market economy' values and ethics into teaching hospitals compromising professional standards and technical excellence. This has further compounded the corruption and decline in standards that have been noticed in government hospitals over the years.

Under pressure of the Medical profession, who are getting more and more involved with lucrative and competitive practice, more colleges are beginning to reconsider this rule and allow various forms of practice, to the detriment of the medical educator's primary commitment. The 'teachers status' is now becoming a status symbol to help the competition in private practice rather than as a vocation of commitment.

The Medical - industrial complex has also made major inroads, in their linkages with, especially in the clinical departments generally compromising / complicating the situation further.

c) **Team Training**

The need for profesional training / orientation and skill development in pedagogy to enhance the educators role of Medical Colelge faculty has been inadequately stressed in Medical Education with the leadership of medical colleges particularly failing to understand the scope and the challenge.

The National Teachers Training Centre initially in JIPMER, Pondicherry and at PGI Chandigarh and BHU, Varanasi have done yeoman service in training some medical college faculty in modern pedagogical methods, to enhance the quality of teaching. However, while many faculty have been trained over the years, an assessment of their impact and contribution leads to identification of two key lacunae in their efforts:

i) Follow up of the trainees and support to 'critical masses' of trained faculty in medical colleges, to introduce reform and enhance teaching quality have been rather adhoc and inadequate, plagued both by lack of finances / resources as well as lack of college leadership commitment.

ii) More significantly however is the 'myopic' view point that teacher training means pedagogical change or educational technology per se. The whole issue of social orientation and relevance of the contents of education and the whole area of motivation to teach including role-model formation - tackling cognitive and affective issues have been neglected.

Pedagogical change per se can lead to the ambigious situation of irrelevant curriculum being taught by relevant methods.

Only when pedagogical change goes hand in hand with 'content change' can the teacher training make a more definitive contribution towards overall National Health goals and priorities.

The MCI recommendations of 1981-82, include the suggestion that workshops should be held for teachers on (a) 'Problem of Community Health and delivery of Health Care' (b) Methods of teaching and examination. These recommendations has been mostly ignored.

Teacher training is still not mandatory. In a recent MCI conference - (September 1994) on 'Training Teachers for Tomorrows Needs' some definitive recommendations towards this goal have however been suggested. The development of a Medical Education unit or department in every college, the training of teachers at the time of induction, in pedagogy; aptitude testing for teaching cadre; teacher evaluation as an integral part of the educational programme and promotion of student, planning of programmes, are all steps in the right direction and are fully endorsed by us (17).

However as mentioned earlier, the content and process of Teacher Training have to be modified from Pedagogical training to a more comprehensive Reorientation and preparation, for the Task of being a Teacher. This is one of the crucial challenges of the years ahead.

Selection

Linked to the whole issue of teachers, is the issue of proper selection. While MCI lays down guidelines about qualifications and experience there is no mention about careful selection based on aptitude or motivation to be a teacher. This issue needs serious attention.

2.9) CURRICULUM DEVELOPMENT / RECOMMENDATION (MCI)

The Medical Council of India recommendations have shown a gradual change from 1960s to the 1980s, with a fair degree of responsiveness of the council, to expert committee recommendations towards greater community orientation of medical education. (see next section). This is particularly significant since Medical College teachers opposing reform or supporting status quo often use the "bogey" of MCI recommendations to stall change.

The MCI recommendations broadly include:

i) Guidelines for teaching including more objectivity, flexibility, small group orientation, less didactics and more problem solving, field involvement and skill training.

ii) Selection factors being modified with further positive bias towards underprivileged.

iii) The main emphasis, increasing importance and wider ambit to the teaching or Preventive and Social Medicine (now extending from first year to final year in most colleges).

iv) Introduction ot a wide range of topics in various subjects to keep medicos abreast with developments in the medical / health field. These have included virology, clinical pharmacology, family planning, demography, nursing, genetics, nuclear medicine, biophysics, space medicine, electronics, molecular biology.

v) Rural / Community postings in Compulsory Rotating internship after the final examination.

vi) A suggestion for orientation / training and involvement of all faculty in rural / community health.

vii) Some examination changes - mostly additional subjects like Microbiology Paediatrics, ENT, Opthalmology.

viii) Additional clinical postings in TB, leprosy, psychiatry, casualty and emergency departments.

While these are all mostly in the right direction, a critique of the overall curriculum development efforts of Medical Council in India focusses on four issues:

i) The PSM subject / Department concept has built up a parallel track in which one department attempts promotive / preventive / social orientation while all the other departments continue the conventional focus on secondary / tertiary hospital medicine. The absence of total college faculty involvement in the process of community orientation is proving to be a serious lacunae and PSM Departments are particularly reaping the counter productivity of the reform efforts.

ii) With increasing involvement in rural / urban communities and field practice areas beyond the teaching hospitals a few medical colleges have been involved with health and development processes and greater involvement of community in decision making and management. A shift from PSM to 'medicine in the community' and to the next phase of empowering community to the responsibility towards health (community health) is required, if this reorientation process has to make an impact on new health attitudes in the doctors, as preparation for the future. The PSM framework of MCI has been seen to be somewhat of a constraint in this much needed transformation.

iii) Training in new pedagogy has not been mandatory; so most medical college teachers continue the didactic culture of their own teachers, most of whom had not received any training either.

iv) MCI has been too keen to keep the Indian medico upto date with advances in medicine. While many things are added nothing has been deleted or modified. So the pressure on the medicos have actually increased and the focus towards primary health care challenges diluted by all the additional high tech topics and updates.

v) Finally there is very little examination reform in medical education so that all the suggested changes do not get reflected in exam reform, and fail to be taken seriously by students and faculty together.

However we would reiterate that in spite of the above lacunae the MCI curricular recommendations of 1982 now applicable to colleges, gives adequate opportunity to all college faculty to creatively innovate within the overall constraints of conventional subject classification and examinations and are not altogether a constraint for change.

<u>The gross lack of knowledge among medical college faculty of the actual MCI recommendations themselves may perhaps be a greater constraint.</u>

2. 10) COST / FINANCING OF MEDICAL EDUCATION

Costing and financing of Medical Education in the country has been a topic, greatly neglected by policy makers and researchers. It had been estimated that the investment on every medical student for the entire phase of training was anywhere from 80,000 to 1 lakh - the range being because of varying expenditures being included in different ways by the researchers. However these estimates are all outdated (mostly 1970's) and have not been updated.

However, the wider question of who finances medical education in India and how, is still inadequately understood except for some observations from the preliminary studies of FRCH (1989).

These studies have shown that the Government till more recently has been the sole investor in Medical education (wholly financed by the public exchequer from tax revenue collected from the people). More that 70% of doctors trained by governmental institutions take up private practice. About 30% migrate to other countries especially the developed countries of the west. Public resources are therefore being used for the benefit of the private sector in the area of Medical Education !

More recently there has been an unbridled growth of capitation fee medical colleges especially in the states of Karnataka and Maharashtra. Apart from being closely linked to a pheonomenal, commercialization of medical education, the problem is worsened by the abettment of the governments, in not only providing tacit approval in spite of stated National and state level policies against such colleges, but also in providing clinical facilities and other benefits to these colleges, who make no investments in the health services of the state.

The recent Supreme Court judgement suggesting that the government subsidise the students in private colleges and even provide soft loans to them is further adding to the earlier mentioned problem of public subsidy for private sector expansion. The move to re-label this group of institutions with the more respectable label of 'self financing institutions', and the confusion caused by the central government policy initiative to secure private sector support to higher education efforts by the state, has made the situation more ambigious.

It is important to note that with the years, the costs of medical education and health care are escalating rather than falling and hence greater clarity in investment in medical education and seeking alternative avenues of support rather than direct commercialisation through donations / capitation fees will be a major challenge to the government. The recent move at both Central and State levels to introduce NRI quotas of the capitation fees variety' in Government colleges is therefore a most retorgressive step supporting commercialization' rather than 'responsible privatization'.

While a public - private mix may be unavoidable, costing / financing of medical education will have to be subject to rigorous policy studies in the next few years, so that government efforts are primarily directed to produce adequate human

power for state-run services and get over the imbalance and acute short fall in the situation of production and enrolment of nursing and allied health professionals.

Medical Education has dominated the health human power development efforts for too long and provided inadequate returns. A time for more rational planning which is need based and data based is urgently needed. Training of Doctors is only one of many tasks in health human power development. This sense of proportion in efforts need to be re-established.

2. 11) CORRUPTION IN MEDICAL EDUCATION

Corruption and graft have become the bane of public and private life in India and have crept into all sectors of development and human endeavour. Medical Education is no exception.

While the more obvious 'commercialization' of medical education - the capitation fees problem has been mentioned in earlier sections there are more insidious aspects of corruption that have seeped into all aspects of this sector as well.

Influence of money power and power politics in the selection of candidates for medical college admission; and in the examination results at various levels; are now becoming commoner.

Misuse of funds for personal aggrandisement or for improperly sanctioned institutional or departmental development; extraneous influences in promotions and transfers and the cancerous growth of private practice values in patient care within government hospitals are all manifestations of the problem.

While at the level of anecdotal and often experiential evidence, there is adequate data on the problem, it is surprising how reports and studies undertaken by professional researchers and numerous internal and external reviews, fail to highlight or even mention this fall in ethical standards in medical colleges. One wonders whether the 'conspiracy of silence' has a professional / class bias as well.

The problem is further worsened by the active involvement of medical college leadership and the seniors in the Medical profession - many of whom by virtue of being compromised personally, are unable to take a public stand against the issue. Even if they do so, it is often a blatant double standard.
Media reports and as mentioned earlier, some committed student sponsored collective action seem to be the only attempts to counter or atleast bring some public scrutiny and pressure on the system, to tackle this problem.
A major study that is recommended urgently to understand the full implications of this degeneration of the medical education sector is the in-depth study of the nexus between
a) the medical - industrial complex; and
b) the 'capitation fees' lobby of medical colleges

with the political and professional health leadership and policy makers in the country. Only then will it be able to fathom a major paradox in the Medical Education situation in India, in recent years i.e., the mushrooming and totally unregulated growth of capitation fees colleges and the fall of ethical standards inspite of central and state governmental level and professional association level stated policies against this type of commercialization.

Any quality control or applications of norms and standards to ensure training of well oriented and skilled human power including doctors in the country will come to naught if this major factor for degeneration of professional standards is not adequately researched and countered through effective legislation and other control measures.

2. 12. MEDICAL STUDENTS - PROTEST MOVEMENTS

An important phenomena in Medical Education process has been growing involvement of medical students and junior doctors in collective action - protests and strikes.

On a superficial overview, this may be seen as a sort of trade-union activity at junior doctor or medical student level to improve their own facilities and their allowances, etc., but a deeper analysis shows that the student and junior doctor community have shown a much more vigorous social concern than the 'teacher' or 'medical' professional community and the issues for which collective democratic protest action have been initiated have included:

i) Concern and action about privatization and commercialization of medical education (the whole recent, Supreme Court case against capitation fees colleges was initiated by student action). The recent Kerala students / medicos strike has also been on the same theme.

ii) Corruption in medical colleges, especially around selection and examinations.

iii) Concern about falling standards or inadequate facilities.

iv) Adhoc policy decisions in response to politically strong pressure groups.
v) Against harrassment of students by teachers in examinations and even generally

Teachers on the other hand have mostly agitated for better pay and sometimes improved facilities, showing a lack of broader social concern.

While the involvement of students / teachers in democratic protest action that could affect patient care in teaching hospitals has been a subject of some public debate, the growing and wider social concern and vitality for action of the medicos must be noted with appreciation. This should also be harnessed for promoting changes in the curriculum framework towards greater social relevance, as well as countering the disturbing trends described earlier.

2. 13) POSTGRADUATE COURSES:

The country has a large network of medical colleges that also offer a wide range of postgraduate courses in a wide variety of preclinical, paraclinical and clinical disciplines apart from an increasing range of public health / primary health care.

However the overall emphasis of postgraduation has been towards specialist and super specialist training for secondary and tertiary care and not towards public health and primary health care needs.

The following observations are pertinent:

i) The number of seats and courses around Public Health and Primary Health Care form a very small part of the overall investment in post graduate medical education (see table - of supplement).

ii) Public Health training centres like AIIHPH - Calcutta, AFMC - Pune and others have grown very marginally. The transition from Public Health' departments / institutes of the past to PSM Departments' presently and From Diploma courses in Public Health to MD courses in PSM have not led to greater field involvement of young medical graduates in practical 'public health action'. On the whole it can be concluded quite definitively that public health as a speciality has been neglected greatly and allowed to degenerate due to lack of support and investment.

iii) There are no courses in General Practice, Family Medicine, MCH care, etc., which would have been supplementary support to public health care efforts.

iv) Most if not all postgraduate courses in basic and clinical sciences do not have adequate modules or units of primary health / health care relevant issues so even the support that can be provided by secondary / tertiary care providers for primary health care efforts is not enhanced at postgraduate levels.

v) A few medical colleges have initiated such options and linkages with varying degrees of success but in the overall, this has been an area of policy neglect.

vi) Many well known projects, institutions and coordinating centres, voluntary health sector have evolved very practical training programmes in community health to reorient and prepare doctors and nurses and others for community health work. These experiments have not been taken seriously by the main stream due to inadequate efforts in dialogue between the medical college trainers and the trainers in the voluntary sector.

An effort to bring about such an interactive dialogue is a crucial pre-requisite for strengthening of PHC oriented PG Training in the country.

TABLE 13

SPECIALITY WISE SEATS AVAILABLE IN POST GRADUATE MEDICAL COURSES IN INDIA

SPECIALITY	SEATS AVAILABLE DEGREE / DIPLOMA	ADMISSIONS 1978-1979 DEGREE / DIPLOMA	%
1) PRE AND PARA CLINICAL *	1082	612	12.8
2) CLINICAL **	4718	3659	76
3) COMMUNITY / PUBLIC HEALTH ***	633	487	10
TOTAL	6433	4758	

SOURCE : 2

* ANATOMY, PHYSIOLOGY, BIOCHEMISTRY, MICROBIOLOGY, PATHOLOGY, PHARMACOLOGY, BIOPHYSICS, APPLIED BIOLOGY, BASIC MEDICAL SCIENCES, VIROLOGY, MYCOLOGY

** MEDICINE (GENERAL), SURGERY (GENERAL), OBST. AND GYNAC, FORENSIC MEDICINE ANEASTHESIOLOGY, OPTHALMOLOGY, CHEST DISEASES, ORTHO PAEDICS, PAEDIATRICS, RADIOLOGY, PLASTIC SURGERY, THORACIC SURGERY, PSYCHIATRY, PHYSICAL MEDICINE & REHABILITATION, CARDIOLOGY, NEURCOLOGY, OTORHINOLARYNGOLOGY, VENERIOLOGY & DERMATOLOGY GASTROENTROLOGY, GENITO URINARY SURGERY, SPEECH AND HEARING, MEDICAL LAB TECHNICIAN, ENDOCRINOLOGY, IMMUNO HAEMATOLOGY AND BLOOD TRANSFUSION, NEPHROLOGY, UROLOGY, MASTER OF DENTAL SURGERY

*** PREVENTIVE AND SOCIAL MEDICINE, CHILD HEALTH, PUBLIC HEALTH, OCCUPATIONAL HEALTH, HOSPITAL ADMINISTRATION, NUTRITION, MATERNAL & CHILD HEALTH, INDUSTRIAL HEALTH, HEALTH STATISTICS, HEALTH EDUCATION

2.14) CONTINUING EDUCATION

The efforts of the government to provide continuing education to the doctors, nurses trained by medical and nursing colleges and para-medicals trained by health and family welfare training centres and other institutions have been very very inadequate and in some regions nearly non-existent.

The estimates today are that professional knowledge changes drastically within 6-7 years requiring regular professional updates if health teams are to be kept informed and skilled for the challenges they have to face.

Except for some programmes organised by the IMAs, CMC Hospital, Vellore; NIHFW, New Delhi; and occasionally by some of the medical colleges in the cities continuing Education is still to take off in any meaningful way, inspite of all the policy rhetoric.

Most health professionals in the field are hopelessly out of date and receive technical information and updating, if at all through the commercial information efforts of medical companies and drug producers, which by their very nature, would be inadequate and biased.

The recent development of the Open University concept and the growing enthusiasm for the distance learning concept as well, provides a new opportunity for Continuing Education of the health team to become a possibility if these mechanisms are adequately harnessed by health policy makers and health human power developers. However, there is a tendency in this sector as well to cater to the creation of new courses and new cadres without adequate policy policy formulation for the continuing education of all those who have already got their basic training but need urgent updates, to keep them professionally competent. If this preoccupation with 'basic education' rather than 'continuing education' continues, then it would perhaps be a major opportunity missed !

GOALS OF MEDICAL EDUCATION SOUTH EAST ASIA REGION

The goal for Reorientation of Medical Education in the South East Asia is that by the year 2000, all medical schools in the region will be producing, according to the needs and resources of the country, graduate or specialist doctors, who are responsive to the social and societal needs and who possess the appropriate ethical, social, technical, scientific and management abilities so as to enable them to work effectively in the comprehensive health system based on primary health care which are being developed in the countries of the Region.

- WHO - SEARO
ROME Booklet No. 1

2.15) MEDICAL COUNCIL OF INDIA

Much has already been mentioned in this report on the contribution both positive (through recommendations and guidelines setting) and negative (through default or lack of regulatory teeth) of the Medical Council of India, which was set up and continues to exist to maintain standards in Medical Education in the Country.

A very important basic problem in the framework of the MCI structure is that since Education is a state subject in the constitutional schedules and hence the primary responsibility of the states and their universities, MCI has in principle a recommending function only, not a regulatory one.

While MCI recognition is mandatory if a degree from one state university is to be reciprocally recognised by other states / university, the ambiguous situation arises when a state / university can continue to recognise a medical college locally, even if it is not approved or recognised by MCI.

State recognition is more easy to manipulate due to power politics and other extraneous factors whereas central or council level manipulation is more remote as a possibility.

Thus the reform of the MCI structure to make Medical Education a national subject and give it adequate powers to regulate standards is crucial. The MCI Act of 1987 which was in the statue books for years and was not passed probably due to various lobbies has now been superseded by the Government Ordinance of 1993 which has then become subsequently an Act as well. This has put a damper on the capitation fees sector but a legal battle is still on regarding what to do with colleges that have already been in existence and have batches of students under training, etc.

The MCI is now the sole authority supervised by Central Government to provide recognition to any college and or to new courses.

An important factor which is however not yet built into the Act / ordinance and needs to be done soon is the whole issue of granting autonomy to some pace-setter institutions to experiment with newer alternative options in Medical Education.

While supervising and maintaining general standards for all colleges, this granting of autonomy will be a stimulus for much needed creative and alternative thinking that is needed to make the present MBBS course more relevant.

All over the world the concept and experimentation on Alternative Tracks and experimental parallel curriculum are going on in full swing, with an International network of these efforts sponsored by WHO and other agencies, actively networking and supporting the change process. India has lagged behind even though within the constraints of MCI framework major changes have been attempted by some colleges (see next section).

Many 'alternative track' ideas have also originated in the Indian milieu though in the absence of actual experimentation, they are still hypothetical.

The MCI organised two important conferences in recent years which have shown a greater understanding of the needs and challenges ahead. The workshop on Need based Curriculum for undergraduate Medical Education in New Delhi, August 1993, and the workshop on Training Teachers - today for tommorrow's needs, New Delhi, September 1994, have made salient recommendations (see next section).

It is a pity however that on the subject of the 'Alternative track' MCI recommendations from the former conference have reiterated that "since the changes proposed in the MBBS curriculum would take care of the kind of competency suggested in the alternate pathway, as such there is no need for the same".

A further qualifying statement in the same recommendation - "However, the MCI may permit and encourage innovative educational reforms for providing inputs for introducing curriculum change" is a chink in the armour and we hope, will be an opportunity to push this idea at a later date.

2.16) EXPERT COMMITTEES AND POLICY REVIEWS

Since the 1970s, there has been a growing concern about the situation of Medical Education in the country and the relevance and nature of its growth. This was part of a broader concern about the inadequacies of the health care delivery system that had been built up in the first three decades since Independence.

a) The Group on Medical Education and Support Manpower (known popularly as the SRIVASTAVA REPORT) was set up in 1974 because "Medical education in India over the years has been essentially urban oriented, relying heavily on curative methods and sophisticated diagnostic aids, with little emphasis on the preventive and promotional aspects of community health ..... Although the number of doctors has steadily increased over successive plan periods, the alienation of the doctors from the rural environment has deprived the rural communities of total medical care."

The group made a detailed analysis of the situation and recommended some far reaching changes which included among others:

i) Community orientation of undergraduate medical education;
ii) Curriculum revision; adoption of suitable teaching methods; examination reform; improvement of facilities in medical college; preparation of teachers and so on;
iii) reform of teaching hospitals and integration into a national referral system complex with peripheral health centres and smaller hospitals;

iv) reorganisation of the pre-medical course and the compulsory rotating internship

v) provision of continuing education;

vi) evolution of a national system of medicine by development of an appropriate, integrated relationship between modern and indigenous systems of medicine;

vii) studies on medical manpower need.

The Committee also recommended the development of a Medical and Health Education Commission to coordinate and maintain standards in health and medical education.

The main contribution of the Srivastava Report was the beginning of a dialogue about the inappropriate pattern and framework of medical education and the direction towards alternative programmes.

b) In 1981 a study group set up jointly by the Indian Council of Social Sciences Research and Indian Council of Medical Research to evolve an alternative strategy for the Health for All goal echoed the concerns of the Srivastava Report by noting that

> ' There is little congruence between the role of the physician and the needs of society; little equilibrium between medical education and health care'.

While endorsing the overall recommendations of the Srivastava Report, this expert group made some relevant additions as well:

i) It categorically opined that there should be no new medical colleges and no increase in the intake of existing medical colleges and no need either to set up new or additional institutions to train additional doctors through short term courses.

In the new model that the group proposed, it was estimated that "we needed around 250000 doctors and we already had an existing stock of 220000 and an annual increase of 13000. So there was a danger of over production!"

ii) It suggested the abandonment of the flexnerised model and the development of a community oriented model to produce a more relevant community oriented physician.

iii) It emphasised greater skill development in the course and suggested enhancement of the doctor's role in training / assisting health teams, health education and epidemiology.

iv) To enhance the 'empathy with people' factor, it suggested that candidates with social and cultural backgrounds closer to the people and from underprivileged groups were to be selected.
v) It emphasised the need to integrate medical education with health care services.
vi) It emphasised the need to evolve an appropriate income, wages and prices policy and to improve service condition of doctors and health workers.

The ICSSR / ICMR study group probably made the most concerted recommendation towards the search for an 'alternative'. However, this was lost in the formulations and policy processes that followed.

c) In 1982-83, the Government of India announced a Comprehensive National Health Policy - for the first time since Independence. The policy clearly stated

> " The prevailing policies in regard to education and training of medical and health personnel, at various levels has resulted in the development of a cultural gap between the people and the personnel providing care".

It identified that effective delivery of health care would depend very largely on the 'orientation towards community health of all categories of medical and health personnel' and exhorted that:

> " . . . . . the entire basis and approach towards medical and health education, at all levels, is reviewed in terms of national needs and priorities and the curricular and training programme restructured to produce personnel of various grades of skill and competence, socially motivated to effectively deal with day to day problems, within the existing constraints".

It then went on to reiterate the need for formulating a National Medical and Health Education policy which would:

i) identify the changes required;
ii) provide human power production guidelines;
iii) seek to resolving sharp reigonal imbalances; and
iv) ensure that all personnel at all levels are socially motivated towards the rendering of community Health services.

d) In 1986, the National Education Policy was announced by the newly created Ministry of Human Resource Development. While it did not specifically include higher education, its framework committed to social justice, human values, equal access; core curriculum promoting democracy, secularism, egalitarianism, scientific temper, gender equality, environmental sensitivity and small family norm; thrust to open and distance learning and continuing education; promoting

autonomy; improvement of pedagogical skills and examination reforms and greater role of communities, voluntary agencies / NGOs and social activist groups in educational efforts are all relevant. It was clear that if there was adequate political will to operationalise this framework, Medical Education reform would have a larger supportive social framework.

e) The draft National Policy on Education in Health Sciences (1989), which was circulated for debate, brought together all the concerns and suggestions that have been evolving since the late 1970s and endorsed.

the earlier recommendations about the Education Commission in Health Sciences;

linkages between health care delivery and education in health sciences;

the interaction between the practioners of the allopathic and other systems of medicine;

the importance of continuing education;

faculty development processes including establishment of regional teacher training centres; and

health human power planning which is data driven.

Its recommendation to make medical education more humanistic, nationally relevant and socially committed were particularly significant. These include:

i) " a power balance between technological and humanistic medicine;

ii) a more holistic approach covering pormotive, preventive, curative and rehabilitative aspects of medicine;

iii) a proper balance between the tertiary care hospital - based and primary care community - based education;

iv) a shift of emphasis from the use of teacher-oriented to learner-oriented methods which would include self-directed learning and self-evaluation;
v) a progressive change from a narrow discipline - oriented teaching to a problem - oriented approach;
vi) a shift from theoretically -oriented teaching to experimental learning;
vii) a major shift in the medical teachers' role from imparting a defined quantum of knowledge to that of a facilitator and motivator of community - based student learning".

f) Finally, the Eighth Plan document has endorsed all the recommendations of previous expert committees and a crucial policy component included in the approach document is:

" Reorientation of medical education to make it problem centred and community based"

thus emphasising the two most critical components of change in the 1990s.

The later 1970s and the whole of the 1980s have thus seen regular policy exhortations and endorsements for radical change in medical education. However while there is a supportive environment at policy formulation level, the social environment and context in which medical education efforts exist and grow are very different as exemplified in some of the earlier sections.

"A basic doctor, to effectively deliver health care to the country, must be an astute clinician, a good communicator and educator and a sound administrator, so as to effectively lead an ever expanding health team for a positive health action work. The action domain of the doctor has crossed the boundaries of drugs and dispensaries and presently extends to a large extent to the families and to the communities - hence the need for the basic doctor to be a community physician".

- Draft National Educational Policy for Health Sciences (1989).

3. APPROACHES TO TREATMENT

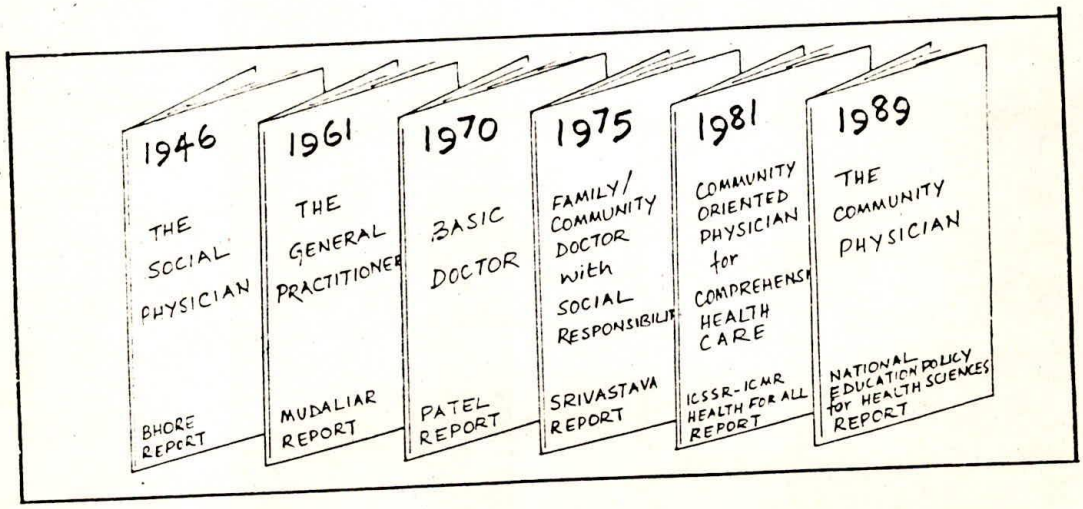
In the previous chapter, we have described the reality of medical education which is both disturbing and thought provoking and emphasised the broader context in which Medical Education reform and reorientation have to be situated.

The picture however is not all bleak. The growing spirit of introspection and dissatisfaction has led to some experimentation, and innovation in medical education in a small number of institutions all over the country where critical masses of committed faculty have attempted to go beyond diagnosis of the problem to some forms of treatment.

This chapter explores the salient features of some of these experiments.

3.1. THE KOTTAYAM EXPERIMENT (1976)

This was an experimental project organised by Prof. Jacob Chandy (a well known Neuro Surgeon and Medical educationist) from 1972-76. The project was a fore-runner for alternative curriculum efforts and though it is not as well known as it should be, because of inadequate documentation and communication, it showed that with adequate will, commitment and imagination, experiments such as this were possible on the Indian scene. Not surprisingly, it was not taken very seriously by the Medical establishment and though it did inspire and stimulate many other health human power development courses by various Southern state governments, an opportunity to build further on the experiment was missed in the specific context of Training of Doctors.



COMMUNITY NURSE? ALTERNATIVE DOCTOR?

THE KOTTAYAM PROJECT

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

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

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

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

A fixed team of examiners drawn from conventional medical college examined the students at the end of each phase and the final examination was attended by a Government of Kerala Evaluation team as well. All the candidates except one was found adequately prepared for their role in the community and the examiners agreed that they were better than the 'average medical intern' or public health nurse' from the conventional colleges. After a year's internship in which 6 months were spent in community health work and 6 months as health educators in village schools, the eight 'community nurses' were absorbed by Mission hospitals of the CSI Madhya Kerala diocese to continue 'community oriented work' in outreach areas of the hospitals. The keyword of the experiment was integration and 'community orientation' at all levels . . . .

. . . . . However three southern states governments adopted the course outline and elements of the experiment for three grades of health workers. Kerala for B.Sc., Public Health (Community) Nurses Training; Tamil Nadu for Health Assistants Course; and Andhra Pradesh (Osmania University) for B.Sc., in Health Sciences geared to training teachers of schools in Education for Health Programmes . . . . . .

(20)

3.2. THE ROME EXPERIMENT (1977)

This experiment of linking medical colleges with three primary health centres each and of providing mobile clinics to facilitate the provision of an extension clinical service by teaching hospital faculty in the designated PHC areas was a major effort of the government in the late 1970's. The project was not only to reorient medical education to primary health care needs but also to link medical education with health service development. This had already been pointed out as a major lacuna in Medical Education development in the country.

While the project was well conceived, the implementation gap was rather wide and it was unfortunate that the programme became counter productive to its, original aims and gradually was neglected in most states of the country.

However, it was probably the only programme of its kind applied to the entire medical college sector and in that context there are many positive and negative lessons to be learnt, especially if the entire experiment was seen as an active learning experience to evolve more comprehensive and more feasible programmes in the future.

The 1981 Evaluation by GOI showed that District hospitals were not adequately involved; faculty members other than PSM Department were not adequately involved; state, regional and institutional level committees were not adequately operational; referral systems between periphery and other levels were highly unsatisfactory; the mobile clinics were under utilised due to shortage of staff; lack of supporting transport to carry students; inadequate funds for fuel; and logistical difficulties were experienced in taking these vehicles to interior villages.

The ROME Experiment
A GOI Initiative

The ROME (Reorientation of Medical Education) Scheme was launched in 1977 to introduce and opportunity for community orientation by students and teachers of medical colleges in India.

The general objective was to involve the medical colleges in the community health problems and in direct deliverry of health care services to the rural population.

The specific objectives were to expose students and faculty members to rural environment: upgrade the quality of health services in rural areas by providing expertise and specialised assistance; taking responsibility of promotive, preventive, rehabilitative and curative health care of 3 Community Development Blocks in the beginning and later covering the entire district within 3-5 years. . . .

Each Medical college was supplied with 3 large mobile clinics to support the development of this referral services complex.

Guidelines were set for the implementation of the scheme by Ministry of Health and Family Welfare. It balanced service delivery provisions with teaching / training recommendations. 105 Medical colleges and PGI Chandigarh accepted the scheme.

In 1985 a National Workshop on ROME Scheme identified the following additional needs to enhance the impact of the scheme: Staff orientation course; additional transport to take students and faculty; expediting accommodation and other construction works; additional staff; preparation of educational materials; better communication between peripheral centres and medical colleges; flexibility in programme to suit institute needs and community needs; continuing education and research efforts to build into the scheme.

An important overall lesson from the ROME Scheme process was that it had to be backed by

i) a concerted reorientation / sensitisation programme for faculty to avoid 'professional disinterest' and apathy;

ii) A well planned resources management exercise to prevent bureaucratic inefficiency since the experiment was affected greatly to both these factors. In the final analysis a lack of both these factors adversely affected the experiment over the years.

3.3. DEVELOPMENT OF THE HEALTH UNIVERSITY CONCEPT

The 1980's have also seen the development of the 'Health University' concept bringing together medical colleges primarily and other health manpower training institutions and teaching hospitals under a single technical university jurisdiction. Tamilnadu already has one and so also Andhra Pradesh. Karnataka and other states have proposals under consideration. While the objective has been primarily administrative reform and standardisation of curriculum and facilities, the 'Health University' concept has great potential if its sponsorrs can explore the idea with greater creativity (see box).

CHALLENGES FOR A HEALTH UNIVERSITY

A network of community health enthusiasts in Karnataka State had placed a memorandum before the expert committee exploring potential challenges for a Health University project which included :

- social sciences orientation,
- community oriented field training,
- pedagogical training for teachers,
- small group / participative and interactive learning experiences,
- bridge / option selective courses between disciplines and systems of medicine,
- curriculum research,
- vernacular bias,
- removing gender bias, and
- radically altering the curriculum of all grades of health manpower. . . . . .

CHC, 1988 **(24)**

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

3.4. MEDICAL COLLEGE INITIATIVES

A few medical colleges have made serious efforts to operationalise some of the ideas and expert recommendations, and some have gone further to evolve their own community oriented training strategies. While most of this reform is within the framework and structure / function determined by MCI regulations, it does represent a very healthy and experimental trend. Except for two or three medical colleges where the 'critical mass' of both committed faculty and experimental initiatives have been large enough to make some impact on institutional, staff and student orientation, in most other situations innovation has been episodic, adhoc and not adequately sustained by leadership.

However they do represent a wealth of ideas and experiences to build upon further and in that sense they are a definitive contribution to the ongoing quest for the right type of training, to produce the basic doctor the country needs.

A study undertaken by the Society for Community Health Awareness, Research and Action from April 1990 - December 1992 (22) identified 50 initiatives that represent this experience.

These can be classified into six broad thrusts which form an integral part of the re-orientation process.

3.4 a) Thrust: IMPROVING PEDAGOGY OF MEDICAL EDUCATION

An important area of innovation and reorientation has been the attempt to clarify objectives at institutional level and departmental levels (instructional); and improve the skills of staff in modern educational techniques. This helps to make the process of education more rational and meaningful both to the students who are the clients of the system and the staff or faculty who are the facilitators of the system. Initiatives are of various types and have been experimented with, to greater or lesser extents in a few colleges (see box).

IMPROVING EDUCATIONAL PROCESS

Defining Institutional Objectives

Defining Intermediate (Departmental) and Instructional objectives

Development of Medical Education Cell with adjunct faculty

Faculty Training Programmes in Medical education skills

Selection Procedures including Psychological tests / Social Skills / Leadership skills / Value orientation

Curriculum development including integration, identification of core abilities, and skills.

Examination Reforms

Faculty / student involvement in Medical Education / research.

Tutorial system

Regular faculty - student meetings on Curriculum issues and Social - Societal issues.

Continuing Medical Education

Internship Assessment / Evaluation.

Narayan, R, et al, 1993 (22)

While improvement of pedagogy' in Medical Education is an important step - this is not sufficient since it has to be balanced with a concurrent change in content as well towards greater social and community relevance.

3.4 b) Thrust - MOVING BEYOND THE TEACHING HOSPITAL

The exploration of greater community based learning opportunities facilitated primarily by the department of community medicine / preventive and social medicine, that was created in each college by the early 70s is an important development.

These helped to provide experience at primary health care level but also opportunities of training in institutions other than the teaching hospital.

Among all the thrusts, this group of initiatives was probably the most difficult to operationalise because the process, the experience and the demands challenged the established value systems of medicine; the culture of medical education; the urban middle class aspirations of students and faculty and the ingrained enthusiasm for high tech / foreign medicine.

However in terms of approaches and options this group of initiatives does represent a large common - sensical response to the idea of a medical college / hospital without walls - allowing community needs and aspirations to gradually stimulate student and faculty to new ways of thinking.

Of all the experiments included in this group, two have shown specific promise. The Community Orientation Programme or Rural Orientation Programme beginning in the preclinical year is a stimulus to the young medical students to understand community dynamics (community anatomy and community physiology) concurrently with his exploration of human anatomy and human physiology.

The community based posting during the Rural internship is a summative experience providing him / her an experience of community based general practice / family medicine / community health.

Some dynamics of both these innovations are described in illustrative case - studies.

MOVING BEYOND THE TEACHING HOSPITAL

Community - based orientation programmes (preclinical)

Urban - slum based multi - disciplinary student programmes

Community Based Family Care Programmes /
Family Health Advisory Service

Community Block Posting (First Clinical Year)

Rural / Urban Slum health visits / camps

Community Block Posting (2nd Clinical Year)

Epidemiological / Public Health Projects

ROME Scheme

Peripheral Hospital Postings - TB, Leprosy, Eye Hospital, Rehabilitation Centres, Isolation Hospital, infectious diseases, District / Peripheral Hospitals

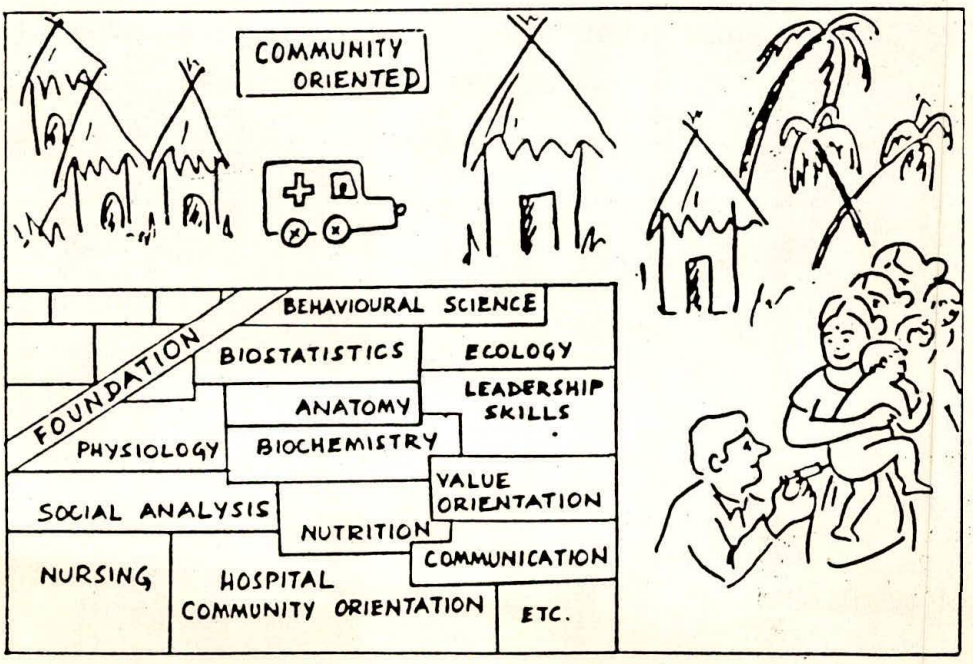
Community Health postings in Rural / Urban field practice areas

Community based camps / clinics by clinical departments

Posting to Government PHCs and sub-centres

Involvement of interns in special situations - Epidemic control, Disaster relief, Plantations, Health Projects by voluntary agencies, Immunization programmes, FP motivation programmes.

Narayan, R. et al 1993 (22)



INITIATIVE: RURAL ORIENTATION CAMPS

A group of thirty pre-clinical medical students camp out in a village school in Karnataka with a few staff members of the Department of Community Medicine. The camp has a double purpose:

i) To get to know the social anatomy and social physiology of rural India and

ii) To explore individual motivations, values and perceptions in a wider social context.

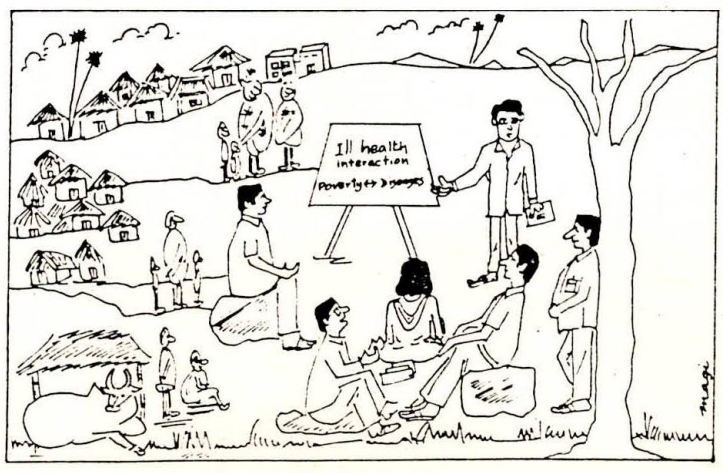
The ethos of the camp is based on group dynamics and participatory planning. During the two weeks, the students go out daily in groups of two's and threes to visit families in the neighbouring villages and elicit information about various aspects of village life, through informal chats. The first week focuses on community dynamics - agriculture, occupations, village government, health and education facilities, markets, transport and communication; the second week on family dynamics - caste, culture and religious traditions, festivals, maternity and child health practices and KAP towards folk, traditional and Western medicine alternatives.

During the two weeks, discussions are organised with village leaders, school teachers, health and development service providers. Students interact with village youth and school children in informal education programs and participate in village events and festivals.

The focus of all the concurrent small group discussions is not only the "what" but also the "why" so that the deeper social dynamics are explored. Since many of the medical students, by nature of the selection process, are urban, middle - class youth, cross cultural conflicts and class prejudices in the interpretation of observations and in the evolving perceptions have to be tactfully challenged. Though simulation games, the complex life conditions in which the rural and urban poor operate and make decisions is experienced.

The two week experience increases social sensitivity and provokes medical students to look beyond the medical college walls to existing social realities.

- Narayan, R. (25)



INITIATIVE : RURAL COMMUNITY HEALTH CLINICS

Interns, who have completed a few months of hospital based internship are posted for three months in teams of two, to small, rural community health clinics in villages. These clinics are organised by the staff of the Community Medicine Department, through mobilization of resources, initiative and involvement of the village communities and development agencies. The resource mobilization is multi-pronged: finance through cooperatives, festival donations; contributions from banks and payment for services; labour; provision of clinic accommodation; accommodation and facilities for young doctors; time and participation of formal and informal leaders for decision - making meetings; volunteers and so on. The interns participate in all these efforts.

They are supported by weekly supplies of drugs, information, morale, cold chain, sterilized equipment, by visiting staff members. A weekly MCH clinic is run by departmental staff. The interns are encouraged to organize school - based health programs, training in health and first aid for village youth, health-education programs, specialist camps. Initiative is primarily left to the interns, while visiting staff are merely facilitators.

The programs wax and wane with the varying motivation of the interns and staff but the open-ended approach promotes initiative and enthusiasm. Each intern undertakes a village based project - a survey or exploration of a health problem. The focus, due to time constraints, is more on methodology and home contact than on findings.

The principle and ethos of the program is to view the intern as a participant in a process not a 'cog in the wheel'.

Many are challenged, many are enthusiastic, but all experience the stark realities!.

- Narayan, R. (25)

3.4 c) THRUST : WIDENING HORIZONS

Introducing new concepts, and topics as sub-units of existing subjects or as additional subjects to widen the horizon of the future doctor and prepare him for involvement in Primary Health Care and community based situations, is another important group of initiatives. There has been a wide range of ideas and experience (see box).

WIDENING HORIZONS

* Introduction of New Subjects like Behavioural Sciences, Ethics, First Aid, Nursing, Integrated Growth and Development.

* Improving interpersonal skills and communication with patient

* Reorienting Pharmacology Training towards Rational Therapeutics, Essential Drugs Concept, and greater Clinical Orientation.

* Special Training Programmes in Epidemiology, Biostatistics, Health Education, Clinical Epidemiology, Management, Health Economics.

* Training in Emergency Medicine, Social Paediatrics, Social Obstetrics, Clinical Pharmacology.

* Internship training in specific additional skills in
  - i) Rational Drug use,
  - ii) Management
  - iii) Ethics
  - iv) Health Education
  - v) Epidemiological Projects
  - vi) Clinical research.

- Narayan, R. et al 1993 (22)

While the Medical Council of India has endorsed a few of these - its list of additions have included a large number of topics aiming at keeping medical students abreast of all the new dimensions of high-tech medicine and advancements, that primarily focus on secondary and tertiary medicine. These have included genetics, nuclear medicine, biophysics, space medicine, electornics, concepts of molecular biology, etc.

With the goal of producing of the 'Basic Doctor' or the physician of the first level of care, it is important that some criteria for selection of areas to be included should be used to prevent the introduction of further minutiae to over burden the already overburdened medical student.

A time has also come to clarify that preparing doctors for Primary Health Care is very different from preparing doctors for Secondary / Tertiary care and therefore not only the mix of subjects but the areas of additional focus may have to be clearly demarcated. The 'include everything' , philosophy cannot any longer be justified.

3.4 d) THRUST : IMPROVING SKILL DEVELOPMENT

An important area of initiative is to enhance the skill development aspects of medical education, the neglect of which has been found to be a serious lacuna in the existing process. The medical student is so overburdened with lectures and practicals mostly at the cost of learning experiences at the bedside of the patient or with the community. The internship is often the first level at which the medical college graduate begins to develop skills and confidence in decision making on 'purposive clinical intervention'. This too has been often sidelined by the pressures of clerking. Attempts to provide opportunities for inservice training and acquring skills through graded responsibilities in actual procedures (see box) will be a major contributer to the production of more confident Primary Health Care providers in the future.

IMPROVING SKILL DEVELOPMENT

Improving interpersonal and communication skills (Preclinical)

Junior Clinical Clerkship (1st Clinical year)

Senior Clinical Clerkship (2nd clinical year)

Posting in general outpatient / general practice departments (GOPD)

Clinical Clerkship in Primary Clinical Departments

Community based camps / clinics by clinical departments

Internship orientation programme in rational presecribing

Involvement of Interns in Primary Health Care Training of Health workers, Dais, Auxiliaries.

Internship training in special clinics in Hospital situation - Curative General Practice Unit / GOPD, etc.

- Narayan, R. et al, 1993 (22)

3.4 e) THRUST : TRANSCENDING COMPARTMENTALIZATION

Many efforts have been made as shown in the box to integrate subjects and phases of teaching in medical education at different levels and get over the compartmentalization that has been a historical development. While the attempt has been to coordinate / integrate different subjects and aspects of teaching around specific systems of the body or health-medical problems - the effort to transcend (see box) compartmentalization has been hampered by the subject wise classification of disciplines in the medical college and the structured framework of phases and examinations built inflexibility into the system as an MCI recommendation.

It is not surprising therefore that these attempts have not been able to move towards the two 'radical changes' in the curriculum now integral part of the curriculum in the more pioneering centres of the world and i.e.,

i) Integration of the preclinical subjects into the teaching of an Integrated Human Biology;

ii) Shift from a subject / system orientation to a total problem based and problem solving orientation in the clinical years.

While some expert recommendations have been made towards this goal and the Consortium of Medical Colleges and others have explored the alternatives at the conceptual level there is much more efforts required in this area of thrust.

TRANSCENDING COMPARTMENTALIZATION

* Foundation Course for entrants in group dynamics, values orientation, linkages between basic sciences and health care communication and learning skills, educational objectives, etc.

* Community - based orientation programme (Preclinical) to study Community anatomy / community physiology

* Humanisation of pre-clinical practicals

* Hospital visiting to make students attentive listeners, compassionate, skilled communicators

* Synchronisation of para-clinical subject lectures with clinical teaching

* Integrated teaching in para clinical and clinical subjects and Clinico-Pathological-Social Case Conferences.

* General Practice Outpatient Department(GOPD)

* Interdepartment Coordinated Clinics in Hospital Programmes - under five, Family Welfare clinics, etc.

* Interns orientation programme including skill development and basic management perspectives.

- Narayan, R. et al, 1993 (22)

3.4 f) THRUST : PROMOTING SELF LEARNING

Some initiatives in the direction of promotion of self-learning by students has been made (see box) but this is probably the weakest area of innovation in India.

It has its roots in a top-down heirarchical teacher and university centred educational system that sees students as passive recepients or clients of a system rather than active participants or collaborators.

Medical educators and experts, have an overall confusion between the terms 'teaching' and 'learning'.

PROMOTING SELF LEARNING

Student Electives

Students involvement in Research

Involvement of interns in special situations

i) Epidemic control
ii) Disaster relief
iii) Plantations
iv) NGOs Health Projects
v) Immunization programmes
vi) FP motivation

Rural (Placement) Scheme

- Narayan, R. et al, 1993 (22)

Improving opportunities for students to decide for themselves; exploring areas independently even outside the curriculum; and involvement in determining the pace of learning even in the established curriculum; are areas of change, being experimented in very few centres of excellence.

In the Indian situation, however, the experimentation has met with some difficulties at the student - expectation level. Because of the structure / nature of the pre-medical educational process and tradition, students are not used to making their own decisions about 'learning' and 'process'. They are not always ready for taking on the independent initiative or responsibility that is the core of any effort to stimulate self learning.

The premedical experience has often converted them into passive recipients and they resist efforts or opportunities to become active participants.

This is an area of challenge in the years to come.

To recapitulate them, an overview of Medical college initiatives, mostly restricted to a small number of (less than 20%) colleges in the country have shown that a multiprolonged effort to reorient medical students in India in the years to come; will have to consist of pedagogical changes; moving beyond the teaching hospital to the teaching community; widening horizons; improving skill development, transcending compartmentalization and promoting self learning. The challenge will be to initiate and sustain these thrusts over the next decade.

3.5) GRADUATE FEEDBACK

What do young doctors who have managed to reach 'Primary Health Care' projects or small peripheral hospitals and health centres have to say in terms of their own feedback on Medical Education? This was the important focus of a complementary study that was done by CHC (1993).

The dialectic tensions, faced by these young graduates in health care service situations, for which they were inadequately prepared by the existing 'medical education' system, led to some 'gut level' and very frank suggestions which could prove very useful to medical educators. This pilot survey was particularly significant since the graduates had two years field experience in the realities of Primary Health Care.

The summary of the salient findings of the survey are shown in the box:

GRADUATE FEED BACK - 1

AREA FOR SKILL DEVELOPMENT

i) Basic Nursing Procedures
ii) Emergency Medicine
iii) Minor Surgical Procedures
iv) Obstetrics
v) Local Anaesthsia
vi) Running a simple Laboratory and Pharmacy
vii) Basic Management Skills
viii) Basic Communication skills
ix) Assessing Community Health Needs and evolving simple strategies
x) Training Health Workers

- Narayan, T, et al, 1993 (23)

GRADUATE FEED BACK - 2

SUGGESTIONS FOR MODIFYING

CURRICULUM STRUCTURE / FRAMEWORK

i) Introduce integrated teaching focusing on common problems
ii) Reduce unnecessary detail in theory
iii) Reduce Pre-Clinical phase to 1 year
iv) Teach Sociology / Psychology / Nursing Procedures in 6 months gained from pre-clinical reduction
v) Increase responsibility and decision making capacity in ward work
vi) Long and short postings - stress importance of both
vii) Final MBBS / Internship postings in ancillary hospital departments:
Pathology laboratory / pharmacy / records department / blood bank / accounts section
viii) Final MBBS / Internship - involvement in training of health workers

- Narayan, T. et al, 1993 (23)

This was probably the first time that consumers of medical education were giving feedback after experiencing work in situations of primary care. The study also moved from empiricism to practical experience and demonstrated that structured interaction and data collection process from the medical graduates who are performing the functions intended in the objectives of under graduate medical education is a useful guide to curriculum development and the reform process. Faculty in medical colleges would be greatly benefited if this feedback mechanism from the consumers of the education system was part of a continuous monitoring system introduced to keep faculty in touch with the realities at the primary health care level.

3.6. THE COMMUNITY HEALTH TRAINERS OF THE VOLUNTARY SECTOR

A study on the large network of Community Health Trainers of the voluntary sector in India lead to the identification of many innovative ideas and methodologies used by these training groups which are significant for medical education reform as well. This significance is particularly so, since many of these training programmes have evolved processes and methodologies to reorient doctors and nurses and other health workers who have had basic training in the existing orthodox institutions but are then attempting to run services / projects in the voluntary sector.

The major contributions of this group of trainers are:

* Experimentation with an alternative philosophy of education which is more participatory, experimental, learner centred and action oriented.

* Introduction of a large number of 'small group' techniques and methodologies in the learning process.

* Strong community orientation in the methods since most of the training is community based and non-hospital oriented.

* Strong social analysis, which explores broader factors in society that affect health exploration of community / societal responses and initiatives to problem solution. This is very different from, the preoccupation with individual / medical / professional problem solution, which is the current orientation of orthodox medical education.

* Focus on skill development especially those important for community based work viz., planning, organisation, communication, health education, training of health workers, community diagnosis, needs assessment, participatory management, evaluation, etc. There is greater emphasis on learning by doing.

* Greater learner centredness with participants of training programmes involved in planning and giving shape to learning experience through feed back, much more deactively than medicos in present day Medical Education.

* Exploration of training beyond 'cognitive aspects' to include training in 'affective aspects' of work / skills eg: value orientation, motivation, self analysis, group dynamic skills, team work, etc.

* Evolution of numerous case studies, simulation games, role models and other interesting problem solving and situation analysis learning methods that help

participants get a deeper and more relevant understanding of the realities in which they have to operate in their future work.

Medical educators experimenting with community orientation camps, community block postings, community based experimental learning, and all field based learning activities beyond the teaching hospitals can learn a lot from this experimentation in the alternative sector. This study showed that there are many groups in the country who have broken out of the traditional / conservative academic moulds and have experimented with alternatives more responsive to peoples needs and community aspirations. It is time that medical educators moved beyond their 'ivory towers' to more actively learn and interact with these pioneers.

A word of caution

In terms of the studies reported in Section 4-6, while the Medical College survey, Community health trainers survey and the graduate feedback survey led to the generation of a large amount of qualitative data on the initiatives towards social relevance and community orientation as well as practical suggestions for reform, the field visit observations and the interactive discussions led to the identification of issues and constraints that determine the long term success or failure of attempted reforms.

It must be stressed that

* Those involved are caught up in : the dialectics between the needs of Primary health care and the demands of secondary / tertiary health care; the changing value system of students and teachers; the established middle class culture of education; the strong urban practice aspirations and the infectious enthusiasm for 'high-tech' and 'foreign' ideas.

* While the Medical Council of India regulations are not as constraining a factor as popularly imagined, an increasing arm chair Community medicine faculty have not been able to provide adequate inspirational leadership, to get over the resistance to 'moving out' by rest of the college faculty.

* Inadequate staff selection and orientation have further compounded the problem.

* Without the realistic stimulus of student and graduate feedback, efforts at reforms continue to be adhoc and empirical. Total faculty involvement is still a myth.

* Change in the 1990s can be brought about only if all these contributing factors are tackled with a courageous, dynamic and creative collectivity.

Of all the colleges in the country experimenting with change in the curriculum, Christian Medical College , Vellore has shown the greatest consistency in terms of framework and innovation even though all this is within the MCI determined framework.

The Vellore Model of training (26) which has evolved through serious experimentation, committed introspection and concurrent evaluation needs to be taken seriously by a larger number of medical colleges in the country. The introduction of the concept of community block postings at three points in the medical course - with specific objectives and methodology, followed up by a well planned internship including a community based phase of posting is nearest to the 'ideal' recommended by the MCI and perhaps goes a little beyond it. Not surprisingly the MGR Health University in Tamil Nadu has initiated a process to facilitate the sharing of the Vellore Model with faculty of other colleges in Tamil Nadu - to stimulate the development of a commonly accepted framework for Community Orientation in Medical Education in Tamil Nadu.

3.7) ALTERNATIVE TRACKS AND EXPERIMENTAL PARALLEL CURRICULUM

In the absence of the concept of 'Autonomy' in Medical Education in India, colleges both 'average' or 'pace-setter' have been constrained to stay within the constraints of a nationally designed and approved curriculum, recommended by Medical Council of India. While the MCI has organised expert meetings and conferences from time to time and recommended modifications to the curricula in response to various expert committee recommendations, and sometimes to the specific initiatives of some of the pace-setter medical colleges or institutions like the NTTC, the overall pace of change has been too cautious and often inadequate to meet the need of our rather different socio-economic-cultural aspirations and needs.

If improvements have been made possible and there are now many innovative programmes in many parts of the world, it has primarily been facilitated by the autonomy of a medical college faculty to try innovative programmes and experiment with drastic changes and radical departures from the past framework.

The shift from subject classification to integrated Human biology and problem oriented teaching was one such shift; From Trainer centred teaching to learner centredness was another such shift.

From clinical orientation to community orientation is yet another. Of all the three, the last one has met with the greatest resistence - but attempts have been made all the same.

The experience in India in pursuit of the Alternative Track has been varied. While all the efforts till the early 1980s was geared to reforming the MCI curriculum towards greater community orientation it is only in the 1980s that serious hypothetical outlines of Alternative tracks and experimental alternative curriculum have evolved.

Six initiatives are mentioned as illustrative case studies. All of them are hypothetical constructs that have not yet been experimented with. But they do represent a growing 'critical mass' of alternative thinking in the country which needs to be linked to autonomous initiatives in the 1990s.

If certain selected colleges in the country are given the freedom to try new experiments, unhampered by national norm regulations and if the selection of colleges is made properly ensuring that institutions with established credibility in facilities, standards and quality of education are included, then many of these hypothetical constructs could be initiated as experiments. Not only would the trials lead to a wealth of experience but Medical Education reform would receive major stimulus as well.

3.7a THE JNU PLEA FOR A NEW PUBLIC HEALTH

The Jawaharlal Nehru University's Centre for Social Medicine and Community Health has been a pioneering training experiment in bringing together a dialogue between bio-medical and social science perspectives in the context of Health care and Health Human power development in the country. Emerging as the chief critique of the existing rationale and framework of Health care in India, it has also raised various conceptual issues about alternative human power development in the country by offering a new perspective on Public Health / Community Health deeply embedded in a Social Science perspective of Health. Its formulations for training the right type of doctor have been tentative but do provide adequate perspective on the New Public Health concept to evolve an alternative track.

The concept of a 'managerial physician' who "have epidemiological capabilities to relate technological interventions to the problems as they exist in the entire population; who have managerial capabilities to run highly complicated organisations; . . . . . and who have social awareness that will motivate them to give privacy to the needs of the individuals, families and communities in all they do. . . . .. ." is the sheet anchor of this alternative framework (see box).

The framework further demands a new social ethos in the medical college system so that "health personnel are trained to 'go to the people and learn from them' using the methods and concepts of social sciences. . . , rather than being sales agents or bureaucrats attempting to impose pre-determined and pre-

packaged programmes on the people . . . . ". They should also "be able to organise awareness building programmes that contribute to the promotion of social control over health services, promote community self reliance and articulate democratic aspirations of the people in the field of health".

This approach called the 'new health education approach' should "encourage people to want to be healthy, to know how to maintain health, to do what they can individually and collectively and to seek help when needed".

The four issues forming part of the educational strategy for producing such managerial physicians skilled in the new health education approach are outlined in the box.

EDUCATIONAL STRATEGY FOR THE MANAGERIAL PHYSICIAN (JNU)

KEY ISSUES

1) Developing a historical perspective of the democratic movements and relating it to a historical account of health service development . . . . .

2) Adoption of an epidemiological approach for the analysis of national health programmes and formulating alternative approaches. . . . . .

3) Analysis of the politicial economy of health, health services, population control, maternal and child health, nutrition and other aspects / components of health service developments.

4) Addition of ecological, social and cultural dimensions to observe epidemiological and demographic phenomena .. . .

- BANERJI, 1986 (2).

3.7b THE mfc ANTHOLOGY OF IDEAS

The medico friend circle is a national level group networking, lobbying and issue raising around the values and approaches necessary for the emerging Community Health Vision in India and also to counter entrenched medical vested interests and attitudes not conducive to a people's health care. The group emerged during the ferment of the 1970's (the emergency and its aftermath). Over the years this group has brought together people from diverse ideological backgrounds to discuss issues of relevance to health care and medical education in the country and through its annual meetings and bulletins, voiced these concerns and explored alternatives.

In the 1980's the group published three anthologies of reflections on Health Care entitled "In Search of Diagnosis (1977); Health Care Which Way to Go (1982) and Under the Lens - Health and Medicine (1986)".

The mainfesto of the Circle brings together its key perceptions of the Indian reality and highlights the stands its members take on a range of health care issues upholding human values and promoting greater sensitivity and responsiveness to the needs of the large majority - the poor and under privileged in India (See Text).

In January 1991 the mfc published its special anthology focussed on Medical Education bringing together reflections of some of its members and group discussions organised particularly at Anand (Gujarat), Calcutta (West Bengal) in the 1980's.

Chapter 13 of this book is a compilation of ideas arising out of all these reflections and discussions arranged under the subheadings used in the MCI curriculum 1981-82. This includes general principles (preamble); objectives of Education; Admission Criteria and Selection of Students; Duration of Course; Medical curriculum - overall design, Nature and organisation of Training centres; Methodology of training; Teaching of Community Health; Selection and Re-orientation of Teachers; Evaluation / Examination; Internship and some additional features.

This probably is among the most comprehensive alternative formulation of community oriented medical education in the country and it is hoped that it will begin a serious dialogue around the development of a concrete alternative or experimental parallel curriculum.

Some recent developments show that such a process may be feasible in the 1990's. Christian Medical College, Ludhiana submitted this Chapter along with other papers to the Punjab University with an application for an experimental parallel curriculum and was given the green signal, but could not start due to an institutional crisis not related to the experiment.

The coordinator of the Expert Curriculum Development Committee of the Tata Institute of Social Sciences, Bombay, has suggested the use of this alternative framework to evolve an alternative course for the Community Oriented Social Worker !

Other medical colleges have shown interest to explore this framework with their medical education cell / curriculum committees as well. A group of medical college faculty participated in a process to respond critically to the issues raised by the mfc document point by point. The CHC studies mentioned in an earlier section are extensions of this process.

3.7c THE ALTERNATIVE TRACK

The International Network of Community Oriented Health Sciences Institutions - a network of alternative track medical colleges in the world initiated a dialogue with MCI and GOI and WHO to initiate an alternative track in India as an experimental parallel curriculum.

The proposed curriculum was to be problem based (McMaster University model) and Community Oriented (GOI's ROME Scheme) and learner centred. The alternative track was to consist of 7 units of 7 months each - devoted to human biology, 3 to Primary Health Care and 2 to Tertiary health care. The internship would consist of 6 months of Rural health care and 6 months in clinical departments. Both the conventional curriculum and the 'alternative track' would be compared in their effectiveness in the context of Primary Health Care and Health for All.

The process was stalled at a subsequent meeting because MCI was unwilling to grant creative autonomy to a few premier institutions to experiment with this curriculum.

The process did not begin with adequate understanding of the Indian situation and was more a top-down cross fertilization of an inadequately tested indigenous programme and a 'model' transplanted from a very different socio-cultural-economic milieu. So while the experiment would have been an opening, it had some structural constraints built into the process as well.

3.7d THE MIRAJ MANIFESTO

The Wanless Hospital in Miraj which was the teaching hospital attached to the Government Medical College in Miraj initiated dialogue and discussion around a document called the Miraj Manifesto - which was a gradually evolving framework of an alternative track through discussion and dialogue with alternative 'frameworks' and experiments emerging all over the country. The Maharashtra Government gave permission to start the alternative experiment but this too was stalled due to the Central ordinance banning new experiments with State Governments sanction in the context of the crisis around the growth and proliferation of the 'Capitation Fee College' phenomena.

3.7e THE MCI'S ALTERNATIVE TRACK

An expert committee set up by MCI recommended an 'Alternative TracK' in the MBBS course geared to preparation for Family Medicine / General Practice / Community Health. The committee laid down some objectives and guidelines and suggested a preclinical track that was similar to the existing one but would then branch of at the clinical phase to a focussed thrust on Family Medicine and General Practice. This suggestion was however rejected by the 300 medical educationists, Deans / Principles and representatives from medical colleges, who met to discuss 'Need based curriculum' in August , 1993.

The recommendations of this workshop unfortunately included the observation that "the proposed changes in Medical curriculum would take care of the competency suggested in the alternate pathway, as such, there is no need for the same".

3.7f CONSORTIUM OF MEDICAL COLLEGES

Since 1987-88 a Consortium of four medical colleges - AIIMS (New Delhi), BHU (Varanasi), CMC, Vellore and JIPMER, Pondicherry, has emerged in the country adopting the 'inquiry driven strategy for medical education reform' popularised by the Centre for Educational Development, University of Illinois, USA, a resource Centre for WHO on Human power training strategies.

The Consortium has been undertaking action research projects on various aspects of curriculum reform and pooling its findings at regular meetings to evolve the framework of a new curriculum step by step.

A few years ago four more colleges were added to the Consortium and the process is continuing.

While all the colleges are premier institutions in the country and have shown a commitment to Primary Health Care as well - they are also medical education leaders because of their long term commitment to high quality curative oriented training in secondary and tertiary health care.

If the framework generated by the Consortium is to move from ideas to action then the greatest challenge before the consortium medical colleges is to change the attitudes of their faculty from the conventional preoccupation with secondary / tertiary care to active exploration of the challenges of primary health / community health care.

These six rather different approaches and processes illustrate the growing restlessness for change, that is beginning to be manifested in a small but perhaps, critical mass of medical college faculty and health policy activists.

Some broad similarities have also emerged (see box). All the institutions involved in this alternative search are all premier institutions or well known policy groups, well conversant with the existing MCI framework and yet still keen on an alternative construct. This development, especially increased in the early 1990's, is a positive development and perhaps the single most convincing reason for the urgent need for the concept and framework of 'creative autonomy' that should be considered by both Government and MCI while keeping up the momentum of reorienting the existing curriculum in the majority of the colleges. A time has come when the government must allow a few 'credible institutions' to experiment more boldly and more creatively.

Such bold and creative experimentation, may, by 2001 AD, help us evolve a new track which can demonstrably produce doctors that are more attuned to Primary health care challenges than the reoriented conventional curriculum.

FRAMEWORK OF THE ALTERNATIVE

SOME KEY COMPONENTS FROM ALL THE ALTERNATIVES

* Medical course to produce a community oriented, socially conscious, primary health care provider.

* Competence and capability in multi disciplinary skills geared to community based action

* More than 50% of entire of course to be commonly based and faculty of all departments to be involved in community based teaching.

* Social / value assessment at selection and concurrent motivation / orientation to community need throughout course

* Problem solving orientation and integration at all levels

* Development of competence and skill rather than mere acquisition of knowledge.

* Communication, Management, Organisational and other skills for community work

* Conventional curriculum changed with courage tempered by flexibility and creativity.

* Strategies evolved through field oriented research and experiments and constantly evaluated / reviewed by Faculty and student.

4. EMERGING TRENDS

4.1 THE SOCIAL CONTEXT OF CHANGE

As we reach the end of the millennium, Medical Education, is at the crossroads. Quantitative expansion of health infrastructure and facilities for training of doctors over the last five decades since independence has resulted in a massive 'over-doctored' situation in the country at the cost of a more balanced investment on development of other members of the health team. Shortages of nurses and health workers are further complicated by over production of the wrong type of doctors. The goal of equity in Health Care has remained as elusive as the goal of the community oriented physician. In many ways this double failure are linked.

However the country has simultaneously entered a very different phase of growth with attempts to integrate the National Economy with the global market economy. A Delphi forecast facilitated by CHC (1992) brought together the views of forty panelists representing all the disciplines of health care and policy to predict the broader Economic - Social - Political context of change in India by 2005 and the emerging Health Scenario in that context. These trends are likely to be the background in which any reorientation or radical reform has to be situated.

The economic, social and political scenario predicted has been summarised. Both negative and positive (see box) trends are highlighted.

The most important development in the 1990's is however the New Economic Policy which involves a major programme of economic liberalization and reform to enhance the role of market forces; provide a larger economic space for the private sector, and aim at a closer integration of the domestic economy with the global economy.

The programme of economic reforms aim at higher growth rates and enhancement of resources to deal effectively with the challenges of poverty reduction and human development. However until these reforms are well underway and stabilised the costs will be high including cuts in employment and in investments in social sectors and infrastructure, and health care or medical education will be no exception. While the government has denied that these reforms will affect the health budget or that of related sectors like Family Welfare, Women and Child Development, Welfare Education and Rural Development, their own policy statement express this anxiety. The India Country statement of the Department of Family Welfare (Govt. of India) at Cairo (Sept. 1994) notes, "There are real risks to the poor from the reforms; adjustment hurts before it helps. Labour is laid off before growth creates more employment. The long run success of the adjustment programme and of India's fuller development requires much greater attention to human resource development.

In the context of population stabilization and sustainable development, it is the more important to break the nexus between hight fertility, poverty, ill health and poor education."

Health human power development planners have to locate their initiatives in this challenging social context.

INDIA - 2005 AD

A DELPHI FORECAST (NEGATIVE TRENDS)

Economic Trends:

Privatization with Commercialization (including health care)
Decrease in government spending (including health and social services)
Increasing marginalization of poor landless and unorganised groups
Increasing cost of services - diagnostic and curative

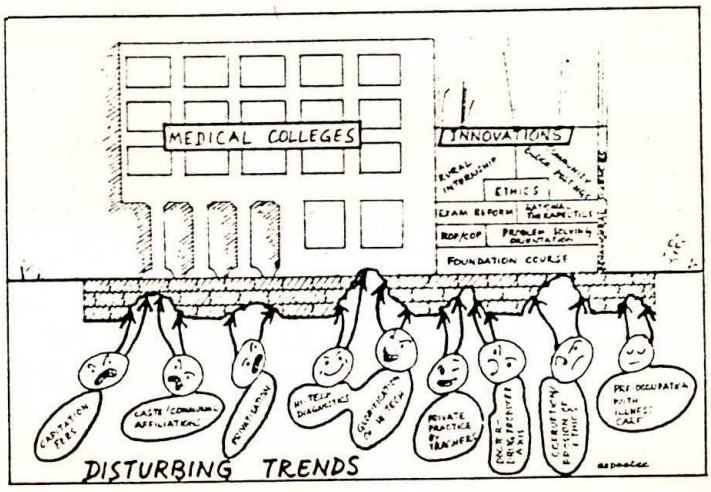
Social Trends:

Progressive erosion of values
Increasing breakdown of families
Increasing urbanization / marginalisation
Increased violence - regional, ethnical, linguistic, caste, communal
Increased mental ill heatlh - unrest and helplessness
Increased use of tobacco and alcohol and abandonment of traditional food practices and traditional systems of medicine

Political Trends :

Political instability
Increased political corruption
Decreased national autonomy

Narayan, T., et al 1992 (30)



INDIA - 2005 AD

A DELPHI FORECAST (POSITIVE TRENDS)

Economic Trends:

Greater Professionalisation in Hospital and Health Management and development of Health Insurance as a means of third party payment.

Social Trends:

Increased education of women
Greater focus on ecological and gender with positive impact on Family Health.
Strengthening of Consumer Protection Councils
Increased litigation in the Health Field.

Political Trends :

Awakening of Dalits, tribals and backward classes and increased participation in political processes.
Greater decentralization and Panchayati Raj.
Increased political consciousness and demands for people centred participatory processes.

Narayan, T. et al 1992 (30)

4.2 HEALTH SCENARIO IN INDIA

The health scenario forecasted by the Delphi exercise was as follows:

"The health problems of India will show a complex epidemiology in the years ahead. While we shall continue to have problems of poverty, poor hygiene, poor nutrition and poor environment, we shall increasingly experience the problems of development, affluence and modernization. New diseases will come up along with the resurfacing of older disease problems with newer trends and patterns. While this 'double burden' of disease will severely stretch our limited resources, our ability to deal with the situation will be severely hampered by the broader socio-economic, political, cultural factors emerging on the national and international scene that will determine our development, welfare and health policies".

The significant health problems we will have to tackle in the years ahead will be:

1. Nutrition related problems - malnutrition complicated by increasing chemicalisation and adulteration of our foods.

2. Water borne diseases including diarrhoea, dysentery, gastroenteritis, typhoid, cholera, hepatitis B and parasitic infections.

3. Communicable diseases like malaria, tuberculosis, leprosy, kala-azar, acute respiratory infections and preventable childhood diseases.

4. Non-communicable diseases including heart disease, hypertension, diabetes and cancer

5. AIDS

6. Problems of mental ill-health including a whole range of stress - related disorders, psychosomatic and psychological problems, suicides and dementias.

7. Addictions and substance abuse problems.

8. Pollution related diseases including allergies, asthma and other hazards.

9. Disabilities and handicap problems

10. Health problems of the aged.

11. Iatrogenic diseases.

12. Accidents.

These health problems will be further complicated by an increasing number of issues significant to health and contributing to the magnitude of disease. These will include:

1. Increasing environmental pollution and deterioration of ecology

2. Increasing challenge of providing basic environmental sanitation.

3. Urbanisation and its consequences / contribution to health of the urban poor

4. Increasing malpractice in medicine and medical care.

5. Irrational therapeutics in the context of a growing abundance of drugs.

6. Problems of increasing population growth coupled with high literacy and inadequate health resources.

7. Increasing violence in society and its consequences on social health.

In response to the challenges of developing and sustaining health care delivery systems to meet these problems and tackle these issues, the following will become significant for the planning process in health care.

1. Health care planning will have to meet the challenges of priorities; equity; limitation of resources; rural - urban disparities; clarifying the role of technology; access; and the roles of government, private and voluntary sectors.

2. Costing and financing of health care will become crucial in the context of the market economy. Commercialization and issues such as cost-effectiveness, self financing, affordability and cost escalations will become significant.

3. Human health manpower development will be complicated by inadequate supplies of the right type of doctors and health team members for primary health care, side by side with over production and over specialisation of the wrong categories of health workers for secondary and tertiary levels.

4. A Rational drug policy that will deal with availability, distribution and adequacy of essential drugs. Side by side with, the control of misuse and overuse of drugs.

5. The challenges of providing basic needs and primary health care for all.

6. The needs, priorities and appropriate choices for secondary and tertiary health care.

7. Health education to promote positive health attitudes and capacities towards primary health

8. Integration of medical systems, both western and indigenous.

9. Research in alternative approaches, health behaviour, women's health and holistic health care.

10. Promotion of holistic health care of positive / wellness model with stress on five basic dimensions of self responsibility, physical fitness, nutritional awareness, environmental sensitivity and stress management.

Though the Scenario predicted is rather black, the challenges of developing and sustaining a health care delivery system to meet these problems will be great and the most challenging of all will be the task to facilitate the training of the right type of health teams with appropriate skills, knowledge and attitudes.

The challenge will also be to produce the new doctor - not only oriented and competent in the demands of Primary Health Care but also committed to the

broader issues of decentralization, ecological and gender sensitivity, and committed to ethical values and human rights in health care.

All policy makers and decision makers will have to be alive and responsive to this new, emerging situation.

"The medical education system and the health care delivery system have each gone their separate ways. There is little congruence between the role of the physician and the needs of society, little equilibrium between medical education and health care. Medicine is still regarded essentially as an enterprise of science and technology, the physician is the repository of all knowledge and dispensation, specialisation is the hall-mark of progress, and the training ground is the teaching hospital. Recent efforts to change this unhappy situation, to produce the 'right' kind of doctor and to give a community orientation to medical education have yet to make any meaningful impact"

ICSSR/ICMR Health for All Study Group, 1981

5. PRESCRIPTION FOR CHANGE

5.1 ISSUES IN MEDICAL EDUCATION

To understand the context of the prescription, six broad issues need to be considered. They form crucial components of a new framework that needs to evolve in our understanding of Health, Health care and Education for Health.

5.1a THE POVERTY - SICKNESS CONTINUUM

The growing realisaton of the intricate relationship between Poverty and sickness has be be at the crux of the new response. The poor are also sick and the sick become poor. At the root of ill health is an inequitous and unjust distribution of the means to health. All health programmes have therefore to be an integral part of human development and poverty alleviation programmes. The new doctor and the health team will therefore have to work in cooperation and solidarity with all those who seek to develop the community and provide the means and environment for every member of the community to reach her / his potential. Community Health and Community development become synonymous with each other. Sustainable development and health care become interlinked.

5.1b COUNTERING THE VESTED INTEREST IN ILL HEALTH :

The growing commercialization of health care and the growing market economy related distortions in health care options and health care responses need to be countered carefully. The ICSSR / ICMR Health for All report warned in the 1980's about the Doctor-Drug producer axis that has a "vested interest in the abundance of ill health". In the 1990's the doctor has now become an agent of a much more complex medical - industrial complex which is determined to make huge profits out of ill health and disease. Unless a strong countervailing movement is initiated by the government, the health professionals, the health and development policy makers and the people - the distortions of health care, already being witnessed, will ovewhelm the systems capacity to respond meaningfully to the problem of ill health, especially of the marginalised in society. Health care and Medical Education of the conventional type will then become increasingly irrelevant to the people's needs.

5.1c EDUCATIONAL TRANSFORMATION:

For too long, educationists and health humanpower development consultants and experts have been preoccupied with the content of change rather than the 'structure' and 'process of change'. The emphasis has been on changing the components of the curricula - the topics and nitty gritty of what is taught - often under the mistaken notion that the irrelevance of the conventional curriculum is

primarily a 'content' irrelevance. There is now a growing realisation that medical education is too teacher centred, too top down, too preoccupied with practice and too ivory towered. There is an urgent need to change it to become learner centred, student and situation driven, community oriented and geared to skill development.

From the 'banking type' of education when facts and minutiae are banked in the students mind, to be recalled when the need demands it, there is a shift of emphasis of learning experiences to become problem oriented and problem solving in their approach, linked to real-life field experiences. This pedagogical transformation is absolutely crucial for change and in the absence of this understanding much of the community based experience has been affected by orthodox educational attitudes - that miss the 'woods for the trees'.

5.1d FROM EXHORTATION TO ROLE MODELS

As a logical corollary of the earlier issue, teachers of medical colleges have to become facilitators of learning experiences 'grounded in community realities' rather than pushers of information 'derived from foreign realities'. This calls for a careful selection policy and a staff development and promotion policy that focusses and recognises community service, and community health involvement as pre-requsites for change. Moving from unconvinced intellectual exhortation, faculty need to speak from conviction of heart and this is only possible if more and more of the medical college teachers have actually initiated and experienced the challenges of health in the community. The process to evolve and sustain such role models become a critical issue for change.

5.1e COLLECTIVE LEADERSHIP

Much of the change strategies in Medical Education in India have suffered from the problem of changing leadership; adhoc individualised efforts; and short term experimentation promoted and supported by a constantly changing medical college leadership. Deans or professors with commitment manage to counter the apathy or status guo and encourage some faculty to seriously take up the issues. However these efforts often wax and wane and the long term response is nullified by leadership change and leadership neglect. There is therefore need to contextualise and root change, especially at institutional level to the creation of a core group of innovaters / experimenters working collectively, towards a change process. The concept of a Medical Education Cell or a core faculty team symbolising collective leadership facilitating a process of change therefore is an important determinant. The MCIs recent recommendation on this is particularly significant and should strengthen the hands of all those who seek and are committed to change. (17)

5.1f THE COLLEGE WITHOUT WALLS.

The weakest link in all current efforts in medical education reform is the efforts to break down the concrete barrier between the teaching hospital and the 'real - life' health services that exist beyond. The 'Medical college without walls' that will enhance the exposure and involvement of faculty and students to the challenges of health care especially primary health / community health situations is an urgent necessity. Medical education and the regular health services must be more closely linked. Students, interns and faculty must become more active participants in health care initiatives. The health care providers and the medical college teachers must become a closely interactive team. Contextual understanding and opportunities for skill development geared to the 'real life' issues of Health care will be greatly enhanced. Ivory towered compartmentalisation between 'excellence' and 'relevance' will be erased. All members of the health team will participate actively in orienting new members of the health team. Health Service and Medical Education will become part of a closely interlinked continuum.

5.1g TOWARDS A CREATIVE AUTONOMY

One of the major drawbacks in the present medical education system has been the lack of the concept of 'creative autonomy'. The MCI in its earnest efforts to regularise and monitor the standards of medical education has provided guidelines and recommendations which are often referred to as 'minimum guidelines'. While it has provided some flexibility for change within its overall guidelines it has tended to be rather inflexible on the 'examination system'. More so any form of licence Raj gradually moves away from the original goal of quality monitoring to the more practical dictates of monitoring rule breakers and guideline evaders. The whole emphasis is on inspection rather than innovation.

While this has some relevance in the Indian situation, where the fall in qualitative standards in all aspects of education has been quite extensive and hence requiring some form of policing, a time has come to release at least a few institutions out of the 145 medical colleges from this licence Raj and provide them the ethos and stimulus to go beyond the minimum to innovate and to evolve experimental parallel curriculum and educational processes that are radically different from the conventional framework. Atleast 6 - 10 colleges have now shown the social and professional commitment to experimentation and the issues of relevance and they should be provided this new opportunity.

The experimentation could be monitored closely and collectively but the emphasis would be on 'innovation and networking' rather than inspection and recognition.

There is enough indication already that in spite of all the distortions and problems that medical education today finds itself in, there is a growing and

committed group of institutions who would be able to sustain and enhance the opportunity of creative autonomy if that was provided. What is therefore urgently needed is not a licence to conform but a licence to experiment.

Are the MCI and, the Planning Commission and the Ministry of Health and Family Welfare willing to 'midwife' this urgently needed experimentation!!

5.2 THE KEY TO CHANGE

Medical Education is at the Cross Roads. Our report so far has highlighted the complex mosaic of issues that have determined the structure, the content and the framework of medical education that we have in the country today. These determinants of change are slowly responding to the new market economy processes that is fast removing medical education from the apex of a pyramid of health care and human resource development (responding to the needs of the large majority of our people) to the apex of another pyramid generated by the medical - industrial complex geared to the profit making potential in ill health. Since the 1980's while the rhetoric has been geared to Primary Health Care, preventive health care and community participation the policy has been geared to high tech expensive medicine and the privatization / commercialisation of health care. However we believe that with hope, optimism and collective commitment this disturbing trend and distortion can be reversed.

In response to the complex mosaic of factors that are actively distorting the role, scope, goal, objectives and context of medical education today, we recommend the following twelve point agenda for action:

1) BAN ON MEDICAL COLLEGE EXPANSION

A comprehensive and total ban on Medical College expansion today till the controversies and distortions are tackled legally and supported by the strengthening of the monitoring of standards, structures in the country.

The ban should be further supported by encouraging existing 'mega' educational efforts (150-300 seats) to reduce number of seats gradually to 100 seats and to improve standards and quality of their programme.

2) STRENGTHENING OF MCI

The MCI has to be strengthened to control the 'capitation fee' lobby and to make a more concerted and pragmatic contribution to the issue of falling standards. While the Indian Medical Council (Amendment) Ordinance of 27th August 1992, (which became an Act of Parliament in April 1993) has empowered the Government of India to regulate medical education --, further steps needs to be taken.

a) The first step is to provide a stronger social and community representation in the perspective setting and decision making bodies of the council so that the people, the community and the social aspects are given importance and not made subservient to professional or commercial interests. Social scientists and people of social standing from other professions, voluntary agencies and consumers groups could be included in the governing bodies. A mechanism for nomination and or cooption of such representatives should be considered.

b) The second step would be to make it more a professional body, rather than a political one by changing the membership patterns of the councils and coopting professional leadership of established nation and region institutions of training and research as statutory members.

c) The third step would be to build up a more professional core team at MCI head quarters that facilitates a more comprehensive data driven process of decision making by providing the council with authentic and relevant background material for its deliberations.

d) Simultaneously the State Medical Councils have to be strengthened by similar steps and reoriented to prevent the slide in standards and the evolving qualitative distortions.

3. NATIONAL HEALTH COMMISSION

Health Humanpower Development Planning in the country has been a serious casualty in the health planning process because of the multiplicity of professional councils and the compartmentalised structure of monitoring and interaction, of the Health Ministry with the training sector. A National Health Commission that brings together the apex bodies of all the health professionals and all the central councils of alternative systems of medicine and the representatives of the key national training centres and coordinating agencies of the voluntary sector is urgently required.

The main task of this commission would be to urgently address the key issues reviewed in the National Education Policy for Health Sciences and initiate a concerted process of need based and data based, integrated Health human power planning. A strong multi-disciplinary, professional secretariate to the commission could ensure that the commission does not fall prey to professional jealousies, inter council rivalries, or political manipulation.

4) MEDICAL EDUCATION REFORM TO BE STRENGTHENED

The reorientation / reform process that has been evolving since Independence is the structure / framework of Medical Education in India, and particularly enhanced since the mid 1970s after the Srivastava Report, should be kept up and strengthened.

While much of the ideas / recommendations have been endorsed by national meetings of Deans and Principles and by Central Council of Health and reinforced by numerous expert committees and think-tanks, a time has come to provide a more concerted supportive supervision to ensure that these recommendations are operationalised and do not remain on paper.

Our studies (22) have shown that atleast a small percentage of colleges have attempted to put these ideas into practice and have taken many of them further.

The 1982 Guidelines of MCI currently in force need an urgent update incorporating the best and most relevant of this Indian experience. With the new Amendment to the IMC Act (1993) there is need to move from 'Recomendations' for undergraduate medical curriculum to 'Minimum requirements in curriculum structure and framework' for continuing recognition by GOI, MCI and state councils.

The key areas / issues to be strengthened based on the experience outlined in the previous chapter are

a) formation of a Medical Education Cell in each college to develop critical and collective leadership to facilitate the reorientation process.

b) Greater measures to select and develop the right type of faculty to enhance the reform process (aptitude testing at time of selection; training in pedagogical skills; community / social orientation and sensitization; motivation to be role models; community experience, etc).

c) Selection procedures - to move beyond selection from PUC marks, to state / central level examinations, complimented by other selection criteria including interview, value assessment, aptitude testing, ban on capitation fees as a means of selection.

d) Stress thrust areas including

i) Widening horizons in rational therapeutics; Alternative systems of Medicine; Health economics and cost consciousness; mental health; health management skills; communication skills, etc.

ii) Transcending compartmentalization through greater vertical and horizontal integration at all levels.

e) Improving Pedagogical skills and learning environment

i) Improving Pedagogy of Medical Education by Faculty training in modern techniques and methods for which many more National Teacher Training Centres (NTTCs) will need to be established.

ii) Improving opportunities for skill development by providing greater time for inservice training including graded responsibilities in actual hospital procedures and community services to allow skill development.

iii) Promoting self learning through greater learner centredness in teaching process and provision of elective opportunities in the hospital and community.

f) Making internship more skill based and task oriented

5) EXAMINATION REFORM

A thorough review of the examination process at all levels of the course is an urgent necessity if reform / reorientation process have to be structurally supported. There is urgent need for MCI to involve Medical Education experts to evolve guidelines for examinations and examiners which can be ratified by Universities and gradually operationalised into the curriculum framework.

In addition, internal evaluation processes should be strengthened and a healthy balance struck between formative and summative evaluation.

Rationalising 'Examination systems' and bringing in a greater consonance between 'examination' and the 'reorientation' process would possibly be the single most important step to sustain / consolidate the change process. Two steps would be particularly relevant.

i) Bringing in safeguards that prevent the operation of money / political influence and other malpractices.

ii) Proper selection and orientation of examiners to prevent irresponsible, unethical and irrational patterns.

6) ESTABLISHING A FRAMEWORK FOR CREATIVE AUTONOMY

Within the framework of the IMC (Amendment) Act, 1993, there is urgent need to evolve a framework for creative experimentation which would allow operationalisation of experimental parallel tracks. These curriculum options should specifically be geared to Primary Health / Community Health / Family Medicine / General Practice.

Some 'ideas' and alternative frameworks have been discussed earlier.

There are enough pace-setter colleges and institutions that have demonstrated these professional competence and social commitment who could be given selective and creative autonomy to experiment with these alternatives. These experiments could be closely monitored and evaluated, to establish, whether the graduates of these new experimental curriculum are more community oriented then those from colleges following reoriented orthodox MCI curriculum.

7) CONTINUING EDUCATION

Urgent efforts to initiate distance learning processes directed to all existing members of the Health and Allied Professions and particular PHC health teams are needed. Thsi will get over the serious problem of health teams being inadequately informed and inadequately skilled, consequent to the explosion of knowledge and the fast changes in professional perspectives.

IGNOU and its regional branches should be involved in this process with close collaboration with the professional associations in the country.

A scheme to link continuing education to professional accredition / registration and service promotion should be introduced.

8) POSTGRADUATE EDUCATION

i) There is urgent necessity to ensure that all post-graduate education, be it in basic or clinical sciences should have a strong social and community orientation linked to National Health Policy and HFA goals. Modules dealing with these aspects must be made complusory in all courses.

ii) Public Health training in the country should be enhanced quantitatively involving all the public health training / research institutes and those departments of preventive and social medicine / community medicine that have shown a high degree of professional excellence and relevance. Practical DPH / DIH courses, perhaps upgraded to MSc programmes should be encouraged rather than the more theoretical MD courses.

iii) A serious review of the Public Health System in the country should be undertaken to explore and consider the development of an All India Public Health Cadre on the lines of IAS to provide professional and technical leadership and impetus to National Health Policy and programmes in the country.

The expansion of 'Public Health Training' suggested earlier could be integrally linked to the creation of the IPH cadre.

9) RESEARCH IN HEALTH HUMAN RESOURCE DEVELOPMENT TO BE PROMOTED

There is urgent need to ensure that Health Human Power development in the country including Medical Education Reforms and Reorientation are based on practical field and action research. The attempts of the 'consortium' of Medical Colleges to determine the change process through inquiry and short term research strategies is particularly relevant. MCI, ICMR, NAMS, and IAAME and other such national organisations should urgently pool their resources and expertise to create a network of Researchers in Health human power development, to enhance the policy evolution and policy implementation process. Many urgent studies that would delineate existing problems and identify operational reforms can be outlined. e.g:

i) The growth ot capitation fees colleges and the resultant distortions in policy.

ii) Who pays for Medical Education - How will future funding of Education be operationalised / enhanced?

iii) Implications of privatization / and New Education Policy on Medical Education.

iv) Brain drain - extent, process, implications and correctives.

v) Corruption in Medical Education System - patterns - process - correctives.

vi) Skills, knowledge, attitudes required at Primary, Secondary and Tertiary levels.

vii) Health human power needs including requirements of doctors / specialists and allied health professionals at all levels - central / state, etc.

10) REGULATION OF PRIVATE SECTOR / PRIVATIZATION IN HEALTH CARE / MEDICAL EDUCATION TRENDS

There is an urgent necessity to set up a National 'think tank', committee or some such review mechanism to undertake a detailed study of the Private Sector in Health Care and Medical Education in the country. The study should explore all aspects of the growth of this sector to assess its existing and evolving contribution. The study should also identify the negative trends; the problems, this sector faces in making a contribution to the national effort; and means by which its efforts can be regulated by the development of standards and technical guidelines.

11) BEYOND DOCTORS - TO HEALTH TEAMS OF PHC'S

Doctors and their training having dominated the health human power sector for too long and have produced major skews in priority and perspectives. It is important to establish a changed sense of priority and focus on the Nurse, the Health workers of the Primary Health Centres and the Community based Health workers including Traditional Birth Attendants as a major policy shift. There is need for rigour, concerted effort and serious reorientation, strengthening and quality enhancement in the training of all these cadres of the Primary Health Care Team if Health for All goals have to be achieved. In terms of focus of reform and the reorientation in the training of all these cadres the general thrusts would be very similar to that outlined for Medical education earlier. But efforts to initiate dialogue, encourage experimentation and enhance skill development and social / community orientation is a major challenge especially if the 'cultural gap' identified by the National Health Policy 1982 between providers and receipients is to be bridged.

12) THE PEOPLE'S HEALTH MOVEMENT FACTOR

For too long the Medical Profession and the Medical Education sector have been directed by professional control and debate. It is time to recognise the role of the community, the consumer, the patient, the people in the whole debate. Bringing Medical Service under the perview of the Consumer Protection Act has been the first of the required changes. Promoting public debate, review and scrutiny into the planning dialogues for reform or reorientation has to be the next step. This could be brought about by the involvement of peoples / consumers representatives at all levels of the system - be it service, training or research sectors. However all these steps can never be brought about by a top down process. What is needed is a strong countervailing movement initiated by health and development activists, consumer and people's organisations that will bring health care and medical education and their right orientation, high on the political agenda of the country.

All those concerned about 'peoples needs' and 'peoples health' will have to take on this emerging challenge as we approach the end of the millenium. Our efforts today, will determine, whether in 2000 AD, Health care and Medical Education will primarily respond to the peoples health needs and aspirations or will professional expectations and market phenomena continue to distort the process?

MARKET or PEOPLE? What will be our choice?

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31. Supreme Court Judgment on Doctors and Consumer Protection Act, dated 13-11-1995.

32. List of Recognised Medical Colleges in India
Medical Council of Indi, 1995
(sent by VHAI-ICHI Secretariat).

ACKNOWLEDGEMENTS

To the CHC team especially
Dr. Ravi Narayan, Dr. C.M.Francis, Dr. V. Benjamin, Dr. Thelma Narayan and Dr. Shirdi Prasad Tekur, for the research and compilation.

To Sri V.J. Jaimon for the tables and diagrams and statistical compilation.

To R. Murali, V.N. Nagaraja Rao, Xavier Anthony, for typing and secretarial assistance.

To Dr. Shirdi Prasad Tekur and Mr. Magimai Pragasam for the animation.

To all the medical college colleagues and resource persons,
who have provided ideas during interactive dialogues in recent months.

LIST OF MEDICAL COLLEGES IN INDIA
(Included in Tables)

ANDHRA PRADESH

1. Gandhi Medical College ,Hyderabad.
2. Osmania Medical College, Hyderabad.
3. Andra Medical College, Visakhpatnam.
4. Guntur Medical College, Guntoor.
5. Kurnool Medical College,Kurnool.
6. Sri venkateshwara Medical College, Tirupathi.
7. Rangaraya Medical College, Kakinanda.
8. Kakaritiya Medical College, Warangal.
9. Siddartha Medical College, Vijayawada.
* 10. Deccan College of Medical Sciences, Hydarabad.

ASSAM

11. Assam Medical College, Dibrugarh.
12. Guwahati Medical College, Guwahati.
13. Silchar Medical College, Silchar.

BIHAR

14. Patna Medical College, Patna
15. Darbhanga Medical College, Darbhanga
16. Rajendra Medical College, Ranchi
17. Jawaharlal Nehru Medical College, Bhagalpur
18. Sri Krishna Medical College, Muzaffarpur
19. A N Magadh Medical College, Gaya
20. Nalanda Medical College, Patna
21. Patliputra Medical College, Dhanbad
22. M.G.M. Medical College, Jamshedpur

GUJARATH

23. B.J.Medical College,Ahmadabad.
24. Government Medical College,Surat.
25. M.P.Shaha Medical College, Jamnagar.
26. Medical College, Vadodara.
27. Pamukhaswami Medical College, PO Karamsad.
28. Smt. N.H.L.Manipal Medical College,Ahmadabad.

GOA

29. Goa Medical College,Bambolin(Goa).

HARYANA

30. Maharshi Dayanand University Medical College, Rohtak.
31. Maharaja Agrasen Institute of Medical Research and Education.

HIMACHAL PRADESH

32. Indira Gandhi Medical College, Shimla.

JAMMU AND KASHMIR

33. Governement Medical College,Jammu.
34. Govt. Medical College, Srinagar.
* 35. Jhelum Valley College of Medical Sciences, Srinagar.

KARNATAKA

36. Government Medical College, Mysore.
37. Government Medical College,Ballary.
38. Karnataka Medical College, Hubli.
39. Bangalore Medical College, Bangalore.
40. Sri. Devaraj Urs Medical College,Tamaka,Kolar.
41. Sri. Siddartha Medical College,Tumkur.
42. St John's Medical Collge, Bangalore.
43. Al-Ameen Medical College, Bijapur.
44. B.L.D.E.assosiation's Medical College,Bijapur.
45. Kasturba Medical College,Mangalore.
46. Adichunchanagiri Institue of Medical Sciences "Vishwmanava",Bellur.
47. J.S.S.Medical College,Mysore.
48. Kasturba Medical College, Manipal.
49. Jawaharalal Nehru Medical College, Belgum.
50. HRE Society's Mahadappa Rampur Medical College, Gulbarga.
51. J.J.M.Medical College, Davanagere.
52. M.S.Ramaiah Medical College, Gokhul Extention, Bangalore.
53. Dr. B.R.Ambedkar Medical College, Bangalore.
54. Kempegowda Institute of Medical Sciences, K.R.Road, Bangalore.

KERALA

55. Medical College, Thiruvananthpuram.
56. Medical College, Kozikode.
57. Medical College, kottayam.
58. T.D.Medical College, Alappuzha.
59. Medical College,Thissur.

MADHYA PRADESH

60. Gandhi Medical College, Bhophal.
61. Gajra Raj Medical College, Gwalior.
62. Mahatma Gandi Memorial Medical College, Indore.
63. Government Medical College, Jabalpur.
64. Pt. Jawaharlal Nehru Memorial Medical College, Raipur(MP).
65. Shyam Shah Medical College, Rewa.

MAHARASHTRA

66. Grant Medical College,Bombay.
67. B.J.Medical College, Poona.
68. Government Medical College, Nagpur.
69. Government Medical College, Aurangabad.
70. Govt. Medical College, Sangli.
71. Dr. V.M.Medical College, Solapur.
72. Swami Ramanand Tirth rural Medical College, Beed.
73. Sri. Vasantro Naik Govt. Medical College, Yavatmal.
* 74. K.J.Somiya Medical College, Bombay.
75. Mahatma Gandhi Mission's Medical College, New Bombay.
* 76. R.A.Education Society's Padmashree Dr. D.Y.Patil Medical College, Bombay.
* 77. Terna Medical College, Bombay.
78. Government Medical College, Nanded.
* 79. Maharashtra Institute of Medical Sciences and Research, Latur.
* 80. Mahatma Gandhi Mission's Medical College, Aurangabad.
81. S.R.T.Rural Medical College, Beed.
* 82. Jawaharalal nehru Medical College, Wardha.
83. Mahatma Gandhi Institute of Medical Sciences, Wardha.
* 84. N.K.P.Salve Institute of Medical Sciences and Research Centre, Nagpur.
* 85. Jawahar Medical Foundetion, Annasaheb Chudaman Patil Memorial Medical College, Dhule.
86. Bharathi Vidyapith's Medical College, Pune.
* 87. N.D.M.V.P. Samaja's Medical College, Nasik.
88. Rural Medical College, (Parvara Medical Trust), Ahmednagar.
89. Shri Bhausaheb Hire, dhule.
90. D.Y.Patil Education Society's, Medical College, Kolhapur.
91. Armed forces Medical College, Pune.
92. Indira Gandhi Medical College, Nagpur.
93. Dr.Panjabrao Deshmuh Memorial Medical College, Amravathi.
94. Krishna Institute of Medical Siences, Satara.

MANIPUR

95. N.E.Regional Medical College,Imphal(Manipal).

ORISSA

96. S.C.B.Medical College, Cuttack.
97. V.S.S.Medical College, Sambalpur.
98. M.K.C.G.Medical College, Berhampur.

PUNJAB

99. Government Medical College, Amritsar.

100 Government Medical College, Patiala.
101. Guru Gobind Singh Medical College, Faridkot.
102. Government Medical College, Chandigarh.
103. Christian Medical College, Ludhiana.
104. Dayanand Medical College, Ludhiana.

RAJASTHAN

105. Sawai Man Singh Medical College, Jaipur.
106. Rabindra Nath Tagore Medical College, Udaipur.
107. Sardar Patel Medical College, Bikener.
108. Jawaharlal Nehru Medical Collage, Ajmer.
109. Dr.Sampurnanand Medical College, Jaipur.
*110. Medical College, Kota.

TAMILNADU

111. Madras Medical College, Madras.
112. Stanlay Medical College, Madras.
113. Government Kilpauk Mdical College, Madras.
114. Changalpattu Medical Collage, Changalpattu.
115. Madurai Medical College, Madurai.
116. Thanjavur Medical College, Thanjavur.
117. Tirunelveli Medical College, Tirunelveli.
118. Coimbatore Medical College, Coimbatore.
119. RajahMuthaih Institute of Health, Rajah Muthiah Medical College, Annanalainagar.
120. Govt. Mohan Kumaramangalam Medical College, Selem.
121. PSG Institute of Medical Sciences and Research, Coimbatore.
122. Perundurai Medical College and Research Centre, Peundurai.
123. Sri Ramachandra Medical College And Research Institute, Porur, Madras.
124. Christian Medical College Vellore.

UTTER PRADESH

125. S.N. Medical College, Agra
126. Motilal Nehru Medical College, Allahabad
127. B.R.D. Medical College, Gorakhpur
128. Maharani Laxmi Bai Medical College, Jhansi
129. G.S.V.M. Medical College, Kanpur
130. King George's Medical College, Lucknow
131. Lala Lajpat Rai Medical College, Meerut
132. Institute of Medical Sciences, Varanasi
133. Aligarh Muslim Univ. Faculty of Medicine (J.N. Medical College), Aligarh

WEST BENGAL

134. Medical College, Calcutta
135. Nilratan Sircar Medical College, Calcutta
136. R.G. Kar Medical College, Calcutta
137. Calcutta National Medical College, Calcutta
138. Bankura Sammilai Medical College, West Bengal
139. North Bengal Medical College, Darjeeling
140. Burdwan Medical College, Burdwan

DELHI

141. All India Institute of Medical Sciences, New Delhi

UNIVERSITY OF DELHI

142. Lady Hardinge Medical College, New Delhi
143. Maulana Azad Medical College, New Delhi
144. University College of Medical Sciences and GTB Hospital, Delhi

PONDICHERRY

145. Jawaharlal Institute of Postgraduate Medical Education

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* Unrecognised by Medical Council of India